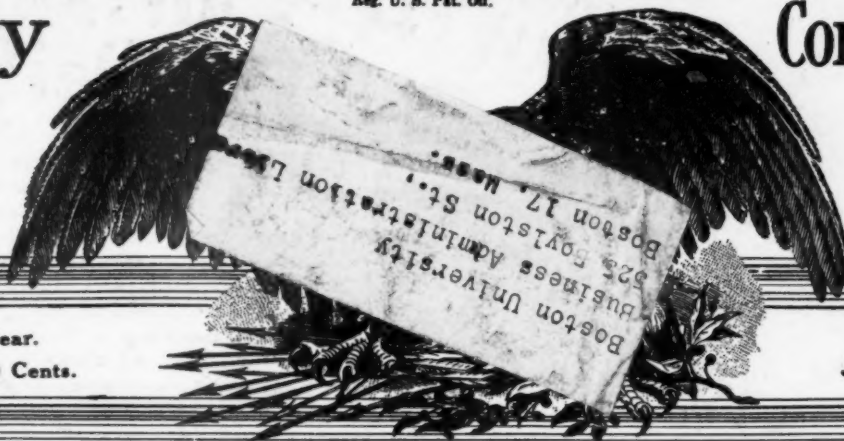


# Manufacturers Record

Industry Construction

Reg. U. S. Pat. Off.



\$6.50 per Year.  
Single Copy, 20 Cents.

Baltimore, Md.  
JULY 17, 1930

## The South's Answer to Business Pessimists

More than \$537,000,000 in construction contracts awarded for the first six months of this year and \$637,000,000 of proposed and planned building and engineering projects announced up to the beginning of July are part of the South's answer to the pessimism and doubt which have recently prevailed among business men. What is more significant is the fact that the total value of building work in the Southern States up to the mid-year showed a substantial gain over each of the corresponding periods of 1929 and 1928. In no uncertain manner have Southern people and nationwide investors demonstrated faith in this section by their acts. A more detailed statement as to what has been accomplished during the past six months toward the material development of the whole Southern region is found elsewhere in this issue.

Substantiating this compilation by the Manufacturers Record, the Universal Atlas Cement Company, after a survey of the construction industry conducted through its representatives in 42 States, reports that the South's "better" construction prospects were four to one against those who took an opposite view, indicating that this section is preparing to keep the pace which it set for the country in recent months.

In emphasizing the importance of construction activity and the part the construction industry plays in stimulating business, we should remember that 80 per cent of the cost of building operations goes directly to labor payrolls, for those engaged in building or in the production of raw materials and their fabrication, up to the most intricate of manufactured goods entering into a completed project. It means that every avenue of trade will share in the stimulating flow of the wage-earners' expenditures.

The Manufacturers Record is not unmindful of the dullness in many lines and of prevailing low prices, but the South during the past decade made its greatest progress in spite of depressions in agriculture and in textile manufacturing. Encouragement is found in what has been accomplished during the worst of the depression; in the fact that the South has felt the deflation to a lesser degree than other sections; that high-priced commodities have been liquidated to a great extent; that money is available at low interest rates for development purposes, and what is of most importance is the belief shared by many business leaders that business is "getting better." The growing optimistic spirit in contrast with the gloom prevailing only a few weeks ago presages the return of the flood tide of business.



## 64 Man Hours Saved Daily

The illustrations show the ash storage bin into which ashes are pumped by the Hydrojet System at the mill of Mead Fibre Company. This plant has 10 underfeed stoker fired boilers, total horsepower being 5500 to 6000. They burn 240 to 300 tons of coal daily, and thus about 25 tons of ash must be removed six days per week.

• • • Ash handling formerly required three eight-hour shifts of three men each.—72 man hours. Now two men, working two hours in the morning and afternoon, handle the same amount of ashes,—8 man hours.

• • • Ashes are carried by the high velocity water stream 100 feet to a sump, then pumped 60 feet and elevated 56 feet to the bin. The water drains from the bin, and the ashes are periodically dumped into railroad cars or trucks.

• • Catalogs on request, address Allen-Sherman-Hoff Co., 223 S. 15th Street, Philadelphia, Pa.

## HYDRO JET

*Nothing Moves but the Ashes*

*at* **MEAD FIBRE CO.**  
Kingsport - Tenn.



# JOIN THE SATISFIED USERS OF SONNEBORN PAINTS

**A**RRANGE for no painting until you have learned about the Sonneborn line. However "unusual" your requirements may be, the Sonneborn way will solve your problem.

One satisfied industrial user writes: "Our works further advise that CEMCOAT WALL PAINT gave them better service than other makes of material."

Another: "We may say without exaggeration that the original whiteness of MARVELWHITE CHEMICAL ENAMEL has been completely retained."

Another: "Your Tile Red Gloss Floor CEMCOAT holds up so well that I can honestly say it is the best I have ever seen."

And so it goes—letters of better painting and money-saving. And Sonneborn guarantees the same satisfaction to you. Our laboratories have studied the very problems that are yours. This wide experience is available to you for the asking. Tell us your problems.

Use the coupon to secure our Cemcoat Book, and write us in full detail about your immediate need, so we may submit our recommendations. You are absolutely under no obligation to buy our paint. Let us help you.

## A Few of the Many Sonneborn Paints And Their Uses

**Cemcoat**—A tough wall coating. Keeps white. Can be washed.

**Cemcoat Floor Enamel**—Gives extraordinary service under severe wear.

**Cemcoat Exterior Paint**—Resists weather. Does not discolor or peel.

**Sonotint**—Flat wall finish. No glare. Can be washed. Lasts longer.

**Metal Protective Paint**—for tanks, pipes, stacks and boilers, condensers, galvanized iron, machine parts, and all metal surfaces.

**Marvelwhite Chemical Enamel**—not affected by fumes and gases. Stays white. Can be washed.

**L. SONNEBORN SONS, Inc.**  
Dept. 32, 114 Fifth Avenue, New York

**L. Sonneborn Sons, Inc.**  
Dept. 32, 114 Fifth Avenue, New York.

Gentlemen: Please send your book on "Cemcoat"—The Industrial Wall Coating. We are also interested in the following: Painting Concrete Floors.....; Hardening and Dustproofing Concrete Floors.....; Preserving Wood Floors.....; Painting Outside Surfaces.....

Name.....

Address.....City.....



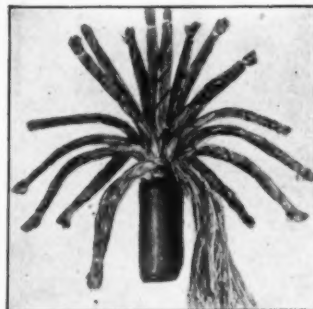
## *In fair weather or foul . . .* Western Electric backs up your telephone service

In foul weather, just as in fair, Western Electric backs up the Bell System with all the apparatus and supplies needed to restore, maintain or expand your telephone service.

This Company manufactures telephone equipment of every sort, with a skill acquired through 50 years' experience. At 32 warehouses it holds great reserves of telephone material available for shipment day or night.

It delivers and installs the apparatus when and where needed.

The large scale manufacture of standardized equipment, too, is an economy. So is the concentrated purchasing—a responsibility that Western Electric undertakes for the telephone companies of the Bell System. All in all, here is a work of mass production, purchasing and distribution which for size and complexity has no parallel in industry.



*18x8 conversations at one time* can be carried on through this new type cable. It contains 3636 insulated wires within a diameter of 2½ ins.



*The flying telephone laboratory* in which Western Electric airplane telephone equipment has been developed by the Bell Laboratories. Provision for communication between ground and plane marks a great forward step in flying.



*One of the 18 materials in your telephone* is rubber from the plantations of Sumatra. Western Electric goes to market in every corner of the world.

# Western Electric



MAKERS  
OF YOUR  
TELEPHONE





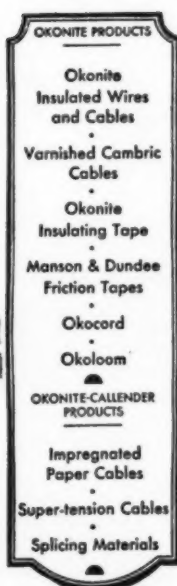
## HOW DOES WILD RUBBER HELP YOUR PRODUCTION SCHEDULE?

**T**HE finest of all rubbers is gathered only in the "bush" of the wild Amazonian jungles. When properly mixed with chemically pure fillers and properly vulcanized it makes a rubber compound that is less subject to deterioration than any other rubber compounds.

This is very important, because *all* rubber compounds deteriorate with time. Unlike moving machinery, they don't wear out, but passively tire out and break down with age. OKONITE, however, is made **EXCLUSIVELY** of virile Wild, Up-river Fine Para rubber and chemically pure fillers of proven qualities. It has the stamina to last for many years, which makes it a dependable electrical insulation.

Thus, wild rubber contributes to a constant flow of electrical power in those industrial plants which are wired with these dependable OKONITE insulated wires and cables.

Specify "OKONITE" for all industrial wiring. That will insure the utmost dependability in your electrical power supply.



### THE OKONITE COMPANY

Founded 1878

THE OKONITE-CALLENDER CABLE COMPANY, INC

Factories: Passaic, N. J.

Paterson, N. J.

SALES OFFICES:

NEW YORK

BIRMINGHAM

CHICAGO

SAN FRANCISCO

PITTSBURGH

LOS ANGELES

ST LOUIS

BOSTON

SEATTLE

ATLANTA

DALLAS

Novelty Electric Co., Philadelphia, Pa.  
F. D. Lawrence Electric Co., Cincinnati, O.

Canadian Representatives:  
Engineering Materials, Limited, Montreal

Cuban Representatives:  
Victor G. Mendoza Co., Havana

## VAN BLERCK

### Industrial Type Gasoline Engine

offer to the industrial trade a power plant capable of delivering the greatest amount of sustained power. When buying a Van Blerck you are guaranteed hard, continuous operation without necessity of constant attention.

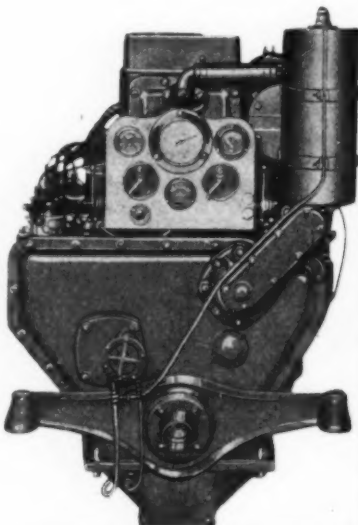
The Van Blerck is suited for the strenuous work demanded in the industrial field. A range of sizes permits a selection of the exact type suited to your particular requirements.

Our Engineering Department is at your disposal, we will gladly cooperate with you.

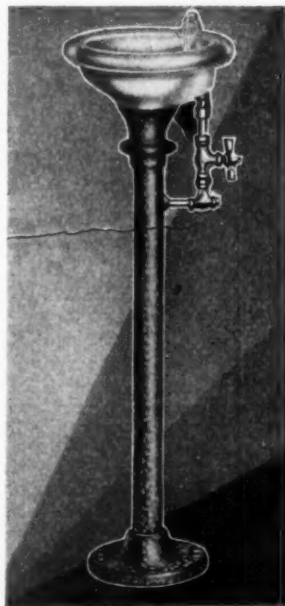
Light Manufacturing  
and Foundry Company

Pottstown, Pa.

End View of Engine Showing Instrument Board and gasoline fuel pumping system oil Vae type.



## The Proven Fountain



The R-S Drinking Fountain has wide acceptance — it is a proven bubbler. From every angle it is efficient.

Besides furnishing clean, refreshing water—each drink is a sanitary one.

Because of its special design it prevents lips from touching the nozzle — contamination is naturally eliminated.

Let us send you illustrated catalog showing the complete line of Rundle - Spence drinking fountains.

RUNDLE-SPENCE MFG. CO.

63-Fourth St., Milwaukee, Wis.

## CONTINENTAL GIN COMPANY

announces many new improvements in Cotton Ginning Machinery and Heavy Duty Oil Engines.

Write for Details

Address: 4600 4th Ave. So., Birmingham, Ala.

**EXCELSIOR** All Standard and Special Shapes

**FIRE** **ALABAMA CLAY PRODUCTS CO.** **BRICK**

BIRMINGHAM ALABAMA

**1 OF 21**

Sizes and Types of Hand and Motor Operated Cold Pipe Bending Machines we make bending  $\frac{1}{4}$  to 8 in. Pipe.

1-in.—3 cents	3-in.—20 cents	6-in.—80 cents
2-in.—5 cents	4-in.—10 cents	8-in.—\$1.00

Over 8,000 in use. Send for Catalogue.  
Pipe Threading and Cutting Machines  $\frac{1}{2}$ " to 10."

**AMERICAN PIPE BENDING MCH. CO.**  
11 Pearl Street Boston, Mass.

**TAYLOR MADE FIREBRICK**

HIGHEST QUALITY—KENTUCKY FIRECLAYS  
UNEXCELLED FOR POWER PLANTS AND STEEL FURNACES  
Also Sillimanite and Diaspore Refractories

**THE CHAS. TAYLOR SONS CO., Cincinnati, Ohio**  
Manufacturers of Refractories for 83 years.  
PLANTS AT CINCINNATI AND TAYLOR, KENTUCKY

## WATER FILTERS

Pressure and Gravity type for Municipal Water Supplies, Rayon Manufacturing Plants, Textile Finishing Establishments, Raw Water Ice Plants, Laundries, Etc.

**ROBERTS FILTER MANUFACTURING COMPANY**

604 Columbia Avenue

Darby, Pennsylvania

## FOR INDUSTRIAL, RAILROAD MUNICIPAL AND OTHER USES

**FILTERED WATER SOFTENED**

Softeners or Filters of any type or capacity as separate or combination Systems.

**AMERICAN WATER SOFTENER COMPANY**

S. E. Cor. 4th & Lehigh Ave.

Philadelphia

## WATER PURIFICATION of every type EQUIPMENT for every purpose

**INTERNATIONAL FILTER CO.**

WORKS AND GENERAL OFFICE  
333 WEST 25th PLACE  
NEW YORK PITTSBURGH CHICAGO SAN FRANCISCO LOS ANGELES  
CANADIAN INTERNATIONAL FILTER CO., LTD., TORONTO

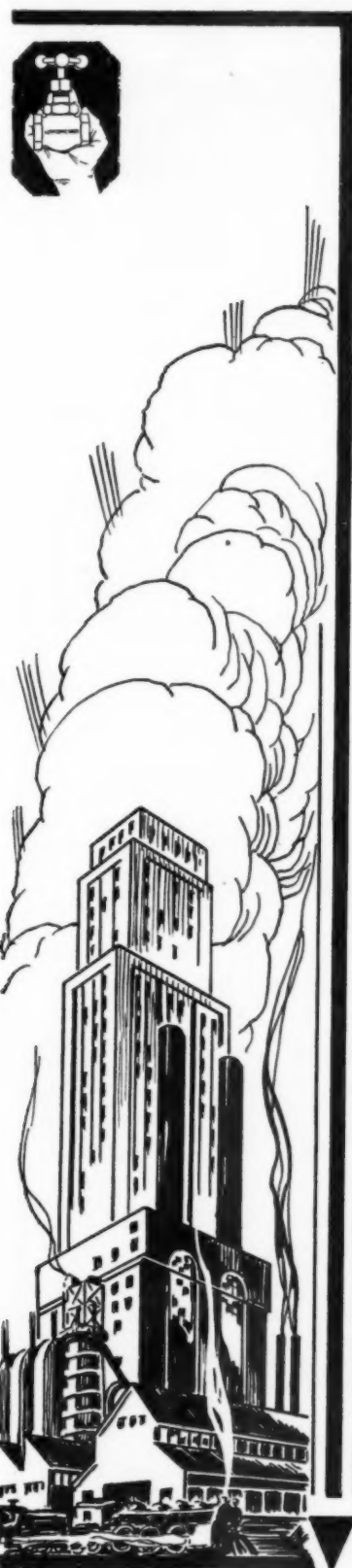
**Vogt PRODUCTS**

REFRIGERATING AND ICE MAKING MACHINERY—  
WATER TUBE & HORIZONTAL RETURN TUBULAR BOILERS  
DROP FORGED STEEL VALVES & FITTINGS—OIL REFINERY EQUIPMENT—Ask for Bulletin

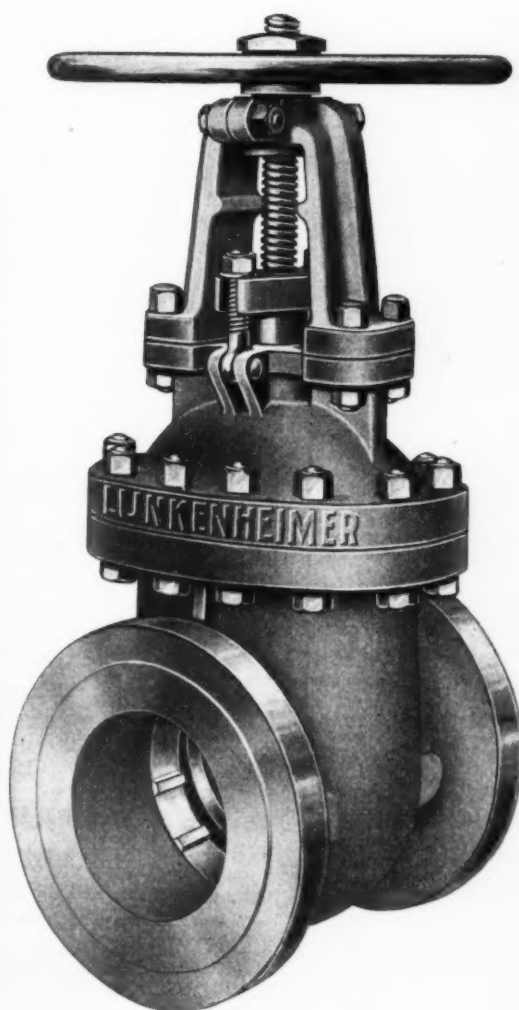
**HENRY VOGT MACHINE CO., Manufacturers, Louisville, Ky.**



# FOR BETTER SERVICE



in  
General Industry



## LUNKENHEIMER Iron Body Bronze Mounted GATE VALVES

provide better service—  
more efficient, economical  
and enduring, because of  
these features:—

Accurately machined  
guides which prevent  
chattering and assure per-  
fect seating of disc—

Exceptionally heavy  
seat rings which seat  
solidly against body  
walls—

Bronze gland liner and  
repacking bushing which  
protect stem from cor-  
rodible contact with  
iron—

Swing gland bolts  
which facilitate repacking.

Made in three pat-  
terns, 125, 175 and 250 lb.  
W. S. P. in all commercial  
sizes. Procurable from  
distributors in all indus-  
trial centers. Write for  
descriptive literature.

**THE LUNKENHEIMER CO.**  
"QUALITY"

CINCINNATI, OHIO, U.S.A.  
NEW YORK CHICAGO BOSTON PHILADELPHIA  
PITTSBURGH SAN FRANCISCO LONDON  
EXPORT DEPT. 318-322 HUDSON ST., NEW YORK

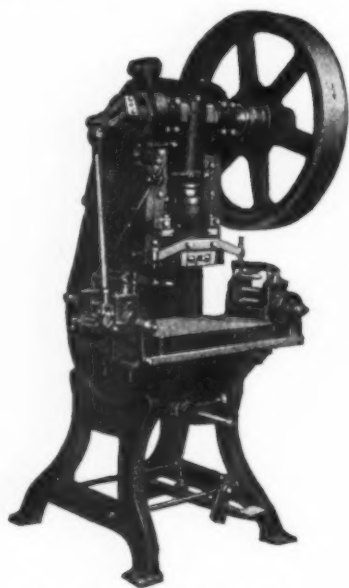
# LUNKENHEIMER VALVES

# BLISS

## MECHANICAL FEED

FAST  
TIRELESS

NERVELESS  
SAFE



Bliss Inclined Power Presses  
fitted with Double-Roll Feed.

If your production includes some part that you make as fast as an operator can feed a press, hour after hour, for days at a time, it is certainly time to investigate mechanical feeding.

The highest degree of economy in the rapid quantity production of pressed metal parts is achieved by careful selection of the most suitable type of press, the *right* feed, and the most durably constructed dies.

It has been said advisedly that the more you make, the better you can equip, and the better you equip, the more you can make.

*"Bliss" on your machinery is more than a name; it's a guarantee.*

E. W. BLISS CO., BROOKLYN, N. Y., U. S. A.  
Factories: Brooklyn, N. Y. Hastings, Mich. Salem, Ohio  
Sales Offices: Detroit Cleveland Chicago Boston Philadelphia  
Cincinnati New Haven Rochester  
Foreign Factories and Offices: London, Eng. Turin, Italy Paris, France

## GOLD SEAL LATHES



20x10 Lathe  
\$1050.00 F. O. B.  
Cincinnati

All types  
12 to 20 inch swing

The Sebastian Lathe Company, 2964 Culvert St. Cincinnati, Ohio

### No. 10 Ball Bearing Punch

In Operation



Capacity,  $\frac{3}{8}$ " hole thru  $\frac{1}{4}$ " iron. Weight, 8½ lbs.

### No. 24 Ball Bearing Punch

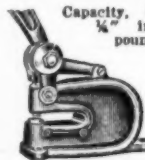
Throat Depth  
3½"



Capacity,  $\frac{1}{2}$ " hole thru  $\frac{3}{4}$ " iron. Weight 45 lbs.

### No. 16 Bench Punch

Capacity,  $\frac{1}{2}$ " hole through  $\frac{1}{4}$ " iron. Weight, 33 pounds.



Operator works in front of machine.

Write for Catalog and Price  
List on Entire Line

WHITNEY METAL TOOL COMPANY  
117 FORBES STREET ROCKFORD, ILL.



## One of 6 TYPES.. With Guaranteed Gears! (the PEERLESS HOIST)

The Peerless is one of 6 types of hand chain hoist made by Harrington. It is an all-round service hoist that will take punishment as a matter of course. Gears, for instance, are alloy heat-treated CUT steel gears, warranted to wear 5 years without abnormal wear or break. (Gears determine largely the safety and strength factors of a hoist.) WRITE FOR DETAILS ON HARRINGTON HOISTS.

THE HARRINGTON COMPANY  
PHILADELPHIA



**P&H**  
Traveling  
Cranes and Hoists

Harnischfeger  
Corporation  
Established 1884  
Crane and Hoist Division  
3827 National Ave.  
Milwaukee, Wis.

## CHARLOTTE LEATHER BELTING CO.

Plant and Office, Charlotte, N. C.  
Branch, 162 N. Clinton St., Chicago

MAKERS OF LEATHER BELT SINCE 1894



# Planning to build ?



## Substantial Savings in Construction are accomplished by this standard low headroom Crane



**A**S much as 2 to 3 feet in building height can be saved by installing a Milwaukee Standard Low Headroom Crane, Type GOR, in place of a standard crane with the necessarily greater overhead clearance required. As little as 2 feet 11½ inches for a 3 ton crane, 30 ft. span; 5 feet 3 inches for a 30 ton crane 60 ft. span are the overhead clearance requirements of these remarkably compact low headroom cranes.

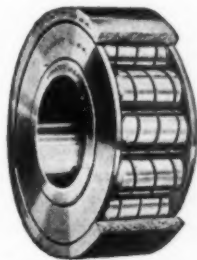
Milwaukee Standard Low Headroom Cranes comprise unusual advantages; minimum headroom; maximum hook lift; close hook approach at crane ends; all the values of standard cranes in safety, strength, and accessibility; every bearing a roller bearing; standard design; sufficient range of capacities.

If you are planning to build, consider carefully the substantial savings in construction that may be accomplished by these Milwaukee Cranes. The height of new buildings can be materially reduced with attendant savings in cost; existing buildings, where crane service is required, need not be remodeled to accommodate a crane, since Milwaukee Low Headroom Cranes require only a minimum of overhead clearance. Write for descriptive bulletin.

**MILWAUKEE ELECTRIC CRANE & HOIST CORPORATION**

*Division of Harnischfeger Corporation*

MILWAUKEE, WISCONSIN



EVERY BEARING  
A ROLLER-BEARING



# MILWAUKEE

**LOW HEADROOM CRANES 3 TO 30 TONS  
STANDARD CRANES TO 50 TONS**

**Goldens' Foundry & Machine Co.**

COLUMBUS, GEORGIA

MANUFACTURERS OF

**MACHINE MOULDED PULLEYS  
HANGERS                      SHAFTING**

Couplings, Pillow Blocks, Floor Stands, Collars, etc.

Send for Price List and Discount Sheet

**EARLE**Cut Spur, Bevel, Herringbone  
and Worm GearsAll sizes. Every description. Oper-  
ating Machinery for Bridges, etc.  
"Les Simplex" Cold Metal Saws.

The Earle Gear &amp; Machine Co.

4719 Stenton Avenue,  
Philadelphia, Pa.110 State St., Boston, Mass.  
95 Liberty St., New York City**GEARS****SOLAR SELF-CLOSING  
WASTE RECEPTACLES**

- 1 Reduce Cleaning Costs.
- 2 Eliminate Fire Hazards.
- 3 Promote Sanitation.
- 4 Reduce Plumbing Expenses.
- 5 Harmonize with Finest Surroundings.
- 6 Will Last Many Years—no upkeep.



Solars are the modern way of collect-  
ing waste in a clean, silent, efficient,  
and unobjectionable manner. Dignified  
and beautiful in appearance. Made in  
nine sizes, and four color finishes.

**THE WHITAKER PAPER COMPANY**

Saratoga St. and Guilford Ave.      Baltimore, Maryland

**PATTERNS**

Patterns are the start of the job.  
Start the job right with correct made patterns.

**A. W. HAAS PATTERN CO.**

179½ Garnett St. S. W.

Atlanta, Ga.

**GALVANIZING—Hot Process****Cadmium Plating a Specialty**

GALVANIZED PRODUCTS FURNISHED

**BIRMINGHAM GALVANIZING CO.**

Birmingham, Ala.

**GALVANIZING      HOT DIPPED  
   PROCESS**

The largest job galvanizing plant in the United States

GALVANIZED PRODUCTS FURNISHED

**JOSEPH P. CATTIE & BROTHERS**

PHILADELPHIA, PA.

**If you are without  
manufacturing facilities****Read  
this**

We are interested in manufac-  
turing a product now owned  
or controlled by an engineer  
or sales agency without manu-  
facturing facilities. If you  
have a product of iron or  
steel for which there is a  
market in Louisiana, Arkansas,  
Kansas, Missouri, Oklahoma,  
Texas and New Mexico, we  
will accept the manufacturing  
responsibility.

A moderately sized, newly  
equipped, structural steel, fab-  
ricating plant located in the  
Southwest is available to you.  
Low freight rates, quick de-  
livery is guaranteed.

Write us giving full information  
and details regarding your product

Address Box 1377

Oklahoma City

Oklahoma

WE MAKE A SPECIALTY OF

**HIGH GRADE GREY IRON AND  
SEMI-STEEL CASTINGS**

All Kinds of Machine Work.      Special Machines Made to Order.  
Prices Will Suit You.      Prompt Service.

Salem Foundry &amp; Machine Works

Salem, Va.

**ELECTRIC STEEL CASTINGS**

Weighing from 1 lb. to 500 lbs. each

Quantity Production A Specialty

Nickel, Chrome and Other Alloy

Quick Delivery

Inquiries Solicited

**CRUCIBLE STEEL CASTING COMPANY**

LANSDOWNE, DELAWARE COUNTY, PA.

DEPENDABLE CASTINGS  
Shipped  
PROMPTLY  
DEEMER STEEL CASTING CO.  
PATTERN  
and  
MACHINE WORK  
DEEMER STEEL CASTING CO.  
NEW CASTLE, DELAWARE

**GENERAL**

Industrial Machine Work — Heavy and Medium  
Builders of Special Machinery  
Brick Yard Supplies

**FERNHOLTZ MACHINERY CO.**

Boyle Ave. and Missouri Pacific Railroad, St. Louis, Mo.



## Another Glorious Tower Salutes the Southern Sky

THIS thirty-one-story addition to the sky-line of San Antonio exemplifies to a marked degree the modern trend in architecture. Beauty of line and detail, refinement of finish, efficiency in lay-out and operation have been attained through artistic and practical conception and faithful execution.

The necessarily inherent qualities . . . strength, safety, durability, fire-resistance . . . have been built in through the use of TENNESSEE STRUCTURAL STEEL.



### SMITH-YOUNG TOWER

Atlee B. & Robt. M. Ayres, Architects.  
McKenzie Construction Co., General Contractors.  
Virginia Bridge & Iron Co., Fabricators and Erectors of the Steel Work.



## Tennessee Coal, Iron & Railroad Company

General Offices: Brown-Marx Building, BIRMINGHAM, ALA.

SUBSIDIARY OF UNITED STATES STEEL CORPORATION

PRINCIPAL SUBSIDIARY MANUFACTURING COMPANIES OF UNITED STATES STEEL CORPORATION:

AMERICAN BRIDGE COMPANY  
AMERICAN SHEET AND TIN PLATE COMPANY  
AMERICAN STEEL AND WIRE COMPANY

CARNEGIE STEEL COMPANY  
CYCLONE FENCE COMPANY  
FEDERAL SHIPBUILDING AND DRY DOCK COMPANY

ILLINOIS STEEL COMPANY  
MINNESOTA STEEL COMPANY  
NATIONAL TUBE COMPANY

THE LORAIN STEEL COMPANY  
TENNESSEE COAL, IRON & R. R. COMPANY  
UNIVERSAL ATLAS CEMENT COMPANY

Pacific Coast Distributors—United States Steel Products Co., Columbia Department: San Francisco, Los Angeles, Portland, Seattle, Honolulu. Export Distributors—United States Steel Products Co., New York City

# McClintic-Marshall Company

Steel Bridges *and* Buildings  
Tanks, Barges, Pipe, Transmission Towers  
*and* Plate Work

General Offices:- PITTSBURGH, PA.

OFFICES IN PRINCIPAL CITIES

**NASHVILLE BRIDGE COMPANY**  
NASHVILLE, TENN.

Engineers—Fabricators and Erectors of Bridges. Buildings, Transmission Towers and other Types of Structural Steel.

## Bristol Steel & Iron Works, Inc.

STRUCTURAL STEEL FOR BRIDGES, BUILDINGS  
AND ALL INDUSTRIAL PURPOSES  
STEEL PLATE & MISCELLANEOUS IRON WORK  
BRISTOL, VA.—TENN.

## ATLANTIC BRIDGE COMPANY

ENGINEERS • CONTRACTORS • ERECTORS  
BRIDGES • FOUNDATIONS • BUILDINGS  
GREENSBORO, NORTH CAROLINA

## DIETRICH BROTHERS

Structural and Ornamental Iron and Steel Works  
Large Stock of Standard and Bethlehem Shapes  
CONCRETE REINFORCEMENTS  
BALTIMORE, MD.

**CHAMPION BRIDGE COMPANY**  
WILMINGTON, OHIO  
Manufacturers of  
Bridges and Structural Work  
Atlanta, Ga. Southern Offices:  
FORT LAUDERDALE, FLA.

## CONVERSE BRIDGE & STEEL CO. STRUCTURAL STEEL

For  
Industrial Buildings, Mines, Refineries,  
and the Building Trade  
CHATTANOOGA TENNESSEE

## Patterson TACKLE BLOCKS

There is a Patterson-built block for every job.

Write for Catalog No. 22  
W. W. Patterson Co.  
87 Water St., Pittsburgh, Pa.



## CAROLINA STEEL & IRON COMPANY GREENSBORO, N. C.

Sales Office:—709 Nissen Bldg., WINSTON-SALEM, N. C.  
Structural Steel FOR Buildings and Bridges  
Capacity 1000 Tons per Month. 3000 Tons in Stock  
The Largest Steel Fabricators in the Carolinas

## REINFORCING BARS

Deformed. All sizes. Rounds and Squares ¼" to  
1¼" New Billet Stock. Straight or Bent.  
Warehouse or Mill Shipments.

KNOXVILLE IRON CO., Knoxville, Tenn.

**BELMONT IRON WORKS**  
PHILADELPHIA NEW YORK EDDYSTONE  
Southern Sales Office, Charlotte, N. C.  
Engineers Contractors Exporters  
Structural Steel  
Complete Industrial Buildings

**RICHMOND  
STRUCTURAL STEEL CO.**  
ORNAMENTAL IRON—GREY IRON CASTINGS  
RICHMOND, VA. BRANCH  
NORFOLK, VA.

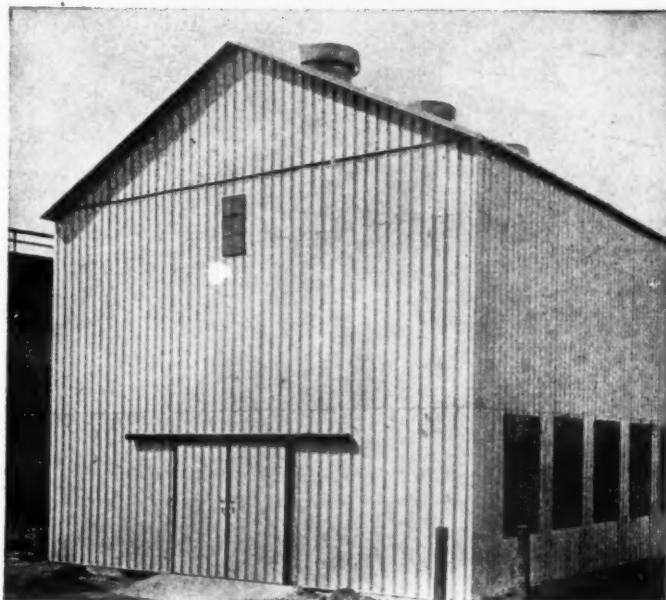
**STEEL**  
DESIGNERS, FABRICATORS, ERECTORS  
of Structural Steel and Concrete Reinforcing Bars  
Immediate Shipments from Charlotte Stock  
Office and Plant: Little Pittsburgh  
CHARLOTTE, N. C.

**SOUTHERN  
ENGINEERING  
COMPANY**



# BUTLER

READY-MADE  
STEEL BUILDINGS



COMMERCIAL FEEDS PROCESSING BUILDING

Made  
entirely  
of **STEEL**

**ECONOMICAL . . .**  
**Practical · Permanent**  
**Shelter for Outpost**  
**Operations**

**I**N MANY industries operations are being brought closer to the source of raw materials to effect economies in transportation, labor, overhead costs and plant investment.

Engineers are finding Butler Ready-Made Steel Buildings offer the economical and practical solution to their outpost sheltering problems, because of such merits as completeness, economy in acquiring and of maintenance, fire-

safeness, speed in erection, appearance and structural qualities which make for permanence yet which permit enlarging or taking down with full salvage for re-erection.

Butler engineers will submit detail information to aid in helping you to make a selection for your particular requirements.



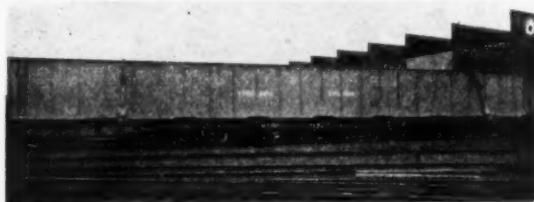
A new booklet picturing various installations of Butler Buildings of all sizes and types awaits your request.

## BUTLER MANUFACTURING COMPANY

1238 Eastern Avenue  
Kansas City, Missouri



938 Sixth Ave., S. E.  
Minneapolis, Minn.



116-ft. Long Girder for Central of Georgia Ry. Bridge Leaving Our Birmingham Plant

### In The Day's Work

**T**REMENDOUS railroad girders as here shown, or roof trusses for your garage, lintels for your residence or columns for the First National Bank skyscraper, all of these and more may make up a day's shipping in our plants.

But all such orders, large or small, receive the same careful attention and inspection to insure proper workmanship and fit.

VIRGINIA BRIDGE & IRON CO.  
Roanoke Birmingham Memphis Atlanta New Orleans  
New York Los Angeles Charlotte Dallas El Paso

127-ft. Long Girder for Louisville and Nashville R.R. Bridge Leaving our Roanoke Plant



STEEL STRUCTURES

**STEEL**

For structural steel, standard steel buildings, steel roof and floor trusses, steel tanks, steel plate construction write THE INGALLS IRON WORKS CO. Plants: Birmingham, Ala., Verona, Pa. (in the Pittsburgh District). Offices: New York, New Orleans, Tampa, Atlanta, Jackson, Miss.



### ROANOKE IRON & BRIDGE WORKS, Inc.

**Structural and Ornamental Iron**  
**Wrought Steel Fences**

**Gray Iron Castings**  
FROM 1 TO 10,000 LBS.

Write for Estimates

ROANOKE, VA.

### THE PHOENIX IRON CO.

MANUFACTURERS OF OPEN HEARTH

**Structural Steel Shapes, Beams,  
Channels, Angles, and Ship Shapes**

Works: Phoenixville, Pa. Main Offices: Philadelphia, Pa.

#### OFFICES:

22 S. 15th St., Philadelphia 30 Church St., New York  
Munsey Building, Washington 110 State St., Boston  
City Savings Bk. Bldg., Albany, N. Y. 26 Victoria St., London

### THE PHOENIX BRIDGE CO.

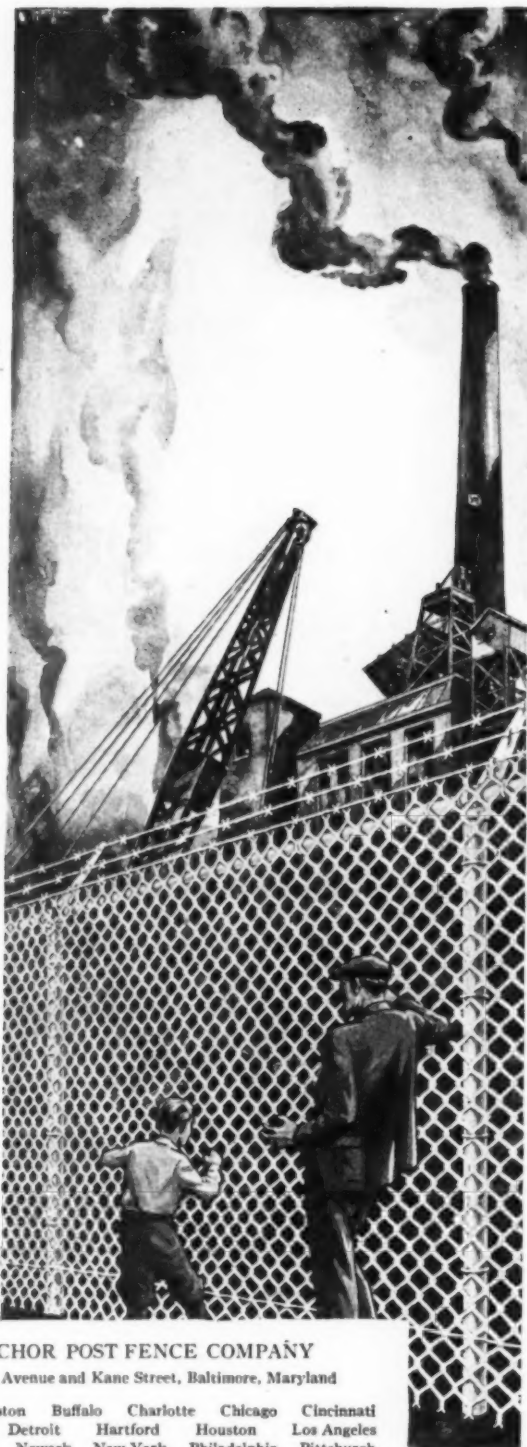
**Engineers, Fabricators, and Erectors**  
**Bridges and Other Structures of Steel**

CAPACITY 60,000 TONS

Works and Engineering Offices:

Phoenixville, Pa.





## STOP COSTLY DAMAGE SUITS

● A steam shovel -- a moving crane -- or any other yard operation excites the curiosity of the passerby. "Keep Out" and danger signs will not thwart his impulse to investigate. And YOU are responsible for his welfare should he suffer injury. Why pay the bills for such negligence?

You can keep these trespassers off your property with an Anchor Fence. A small part of a damage suit will more than pay for the extra cost of an Anchor Fence installation.

Have the local Anchor representative submit a plan and cost estimate.

### ANCHOR POST FENCE COMPANY

Eastern Avenue and Kane Street, Baltimore, Maryland

Albany	Boston	Buffalo	Charlotte	Chicago	Cincinnati
Cleveland	Detroit	Hartford	Houston	Los Angeles	
Minneapolis, L.I.	Newark	New York	Philadelphia	Pittsburgh	
St. Louis	San Francisco	Shreveport			

*Representatives in all principal cities.  
Consult your local classified directory.*

# ANCHOR FENCES

MADE BY THE MAKERS OF AMERICA'S FIRST CHAIN LINK FENCE

**Kerlow Steel Floors**  
222-236 CUMBER AVENUE  
JERSEY CITY, N. J.



**Non-Slipping**




For strong and safe flooring—  
**WALTER BATES STEEL FLOOR GRATING and STAIR TREADS**

**WALTER BATES STEEL CORPORATION**  
GARY INDIANA.

**Stewart's IRON AND WIRE FENCE**  
STANDARD OF THE INDUSTRY



CHAINLINK FACTORY FENCE



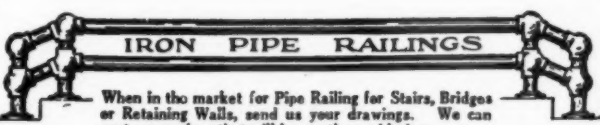
ORNAMENTAL IRON GATES

Iron Picket Fence  
Chainlink Wire Fence  
Plain and Ornamental Iron Gates  
Chainlink Gates  
Miscellaneous Iron Work

For Full Information Write

**THE STEWART IRON WORKS COMPANY**  
INCORPORATED  
619 Stewart Block CINCINNATI, OHIO

**IRON PIPE RAILINGS**



When in the market for Pipe Railing for Stairs, Bridges or Retaining Walls, send us your drawings. We can quote you prices that will be worth considering.

**PIPE RAILING CONSTRUCTION CO., Long Island City, New York**

**CEMENT GUN CONSTRUCTION CO.**  
The Original  
**GUNITE**  
Contractors




Estimates and information cheerfully given  
537 So. Dearborn St., Chicago, Ill.  
Pittsburgh Branch New York Branch  
Oliver Bldg. Grand Central Terminal

# undamaged

—yet they stopped two serious fires!



Unretouched photographs, taken April 8th, 1930, of the Kinnear Automatic Rolling Doors installed in the Weiskopf Building in 1912, as they appear after eighteen years of continuous service and fire protection duty.

**J. Weiskopf & Son**  
GRANDS AND WHOLESALE DEALERS IN  
WOOLLEN RAGS AND PAPER STOCK.

OFFICE AND FACTORY STOCKS WAREHOUSE  
1075-1077 WESTERN ST. N. W.  
HOBOKEN N. J. NEWARK AND ST. LOUIS  
ROAD TO 1333 WESTERN ST. N. W.

CLEVELAND, O. May 16/19

The Kinnear Mfg. Co.,  
City.  
Gentlemen:

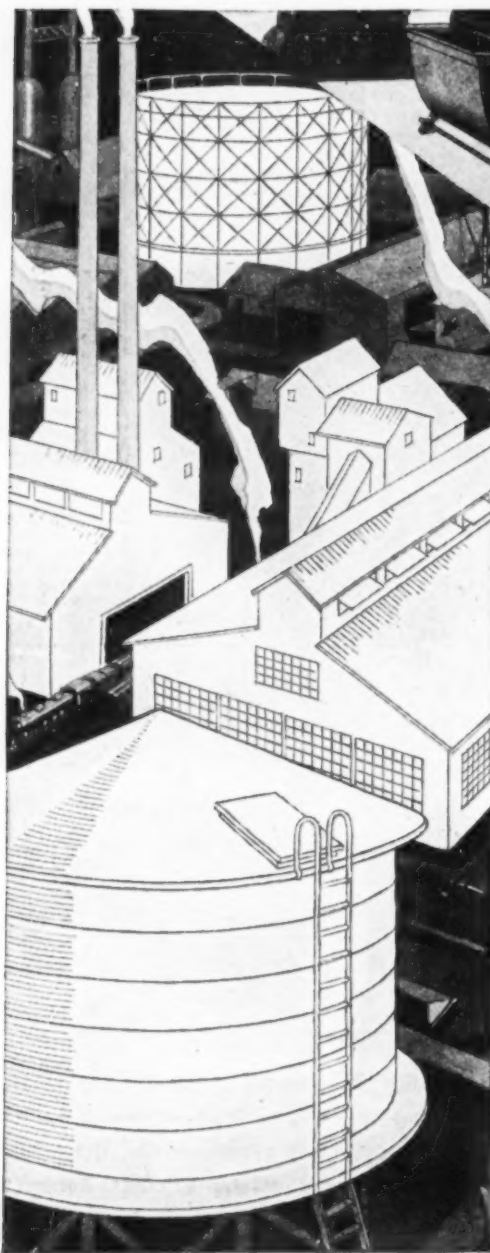
In August 1912, we erected a fire-proof building wherein we installed four Kinnear Steel Automatic Rolling Doors and which we cannot praise too highly, as on May 20th a fire broke out in our building, and as weiser doors as much damage as fire in our line, must say your doors worked perfect in keeping the fire and water confined to the one room only. There is no telling what damage we would have suffered had it not been for those great Kinnear Doors. We are now contemplating going into larger quarters, the present being too small - and we positively will have nothing but Kinnear Doors. We advise all erecting new buildings to be sure to install the Kinnear Doors. Wishing you success, we remain  
Yours respectfully,  
J. Weiskopf & Son

EIGHTEEN years of continuous service duty—two fires confined a single room—and still in good operating condition—on service duty every day. That's the record of the Kinnear Automatic Rolling Doors installed in the Weiskopf Building in 1912. It takes doors of sturdy stuff to stand such punishment—but that's the way all Kinnears are made. Designed for fire or service duty only, or a combination of both—manual or motor operated. Literature or estimates without charge or obligation.

**Kinnear**  
ROLLING DOORS

**THE KINNEAR MANUFACTURING CO.**  
823-873 Field Avenue, Columbus, Ohio, U. S. A.  
Boston Chicago Cincinnati Cleveland Detroit New Orleans  
New York Philadelphia Pittsburgh Kansas City Washington

The best  
Aluminum Paint Is Made  
with Alcoa Albron Powder



BY THE USE OF ALUMINUM PAINT  
Industry bars rust, adds to the life of  
wood, uses and diffuses daylight . . .

Hammering their way relentlessly through ordinary paint film, the elements destroy millions of dollars worth of industrial property every year.

Checking this onslaught, preserving wood, metal and plaster, aluminum paint is bringing to plant owners an entirely new conception of how very completely a metallic paint film can protect both factory exteriors and interiors.

Aluminum paint is long-lived because it has a pigment composed of minute, thin, flat flakes of pure aluminum. When this paint is brushed or sprayed on, these flakes "leaf" together, pile up, one upon another, into a coat of metal protection. Moisture penetration is retarded, and even the paint-destructive ultraviolet rays of the sun are held in check by it. Fume and smoke leave it unharmed.

Aluminum paint will stand up far longer than old-fashioned paints. Yet, gallon for gallon, it costs no more. Outside, it conquers even the severe weather conditions to which tanks, towers, roofs, walls and fences are exposed. Inside, it brightens rooms because it reflects daylight.

The best aluminum paint is made with Alcoa Albron Powder, mixed with a suitable vehicle made by any reputable paint manufacturer. Aluminum Company of America does not sell paint. It does manufacture Alcoa Albron Powder which your paint contractor can buy from most paint manufacturers, jobbers or dealers by specifying "Alcoa Albron Powder."

Ask for booklet, "Aluminum Paint, the Coat of Metal Protection." Address ALUMINUM COMPANY of AMERICA; 2428 Oliver Building, PITTSBURGH, PENNSYLVANIA.



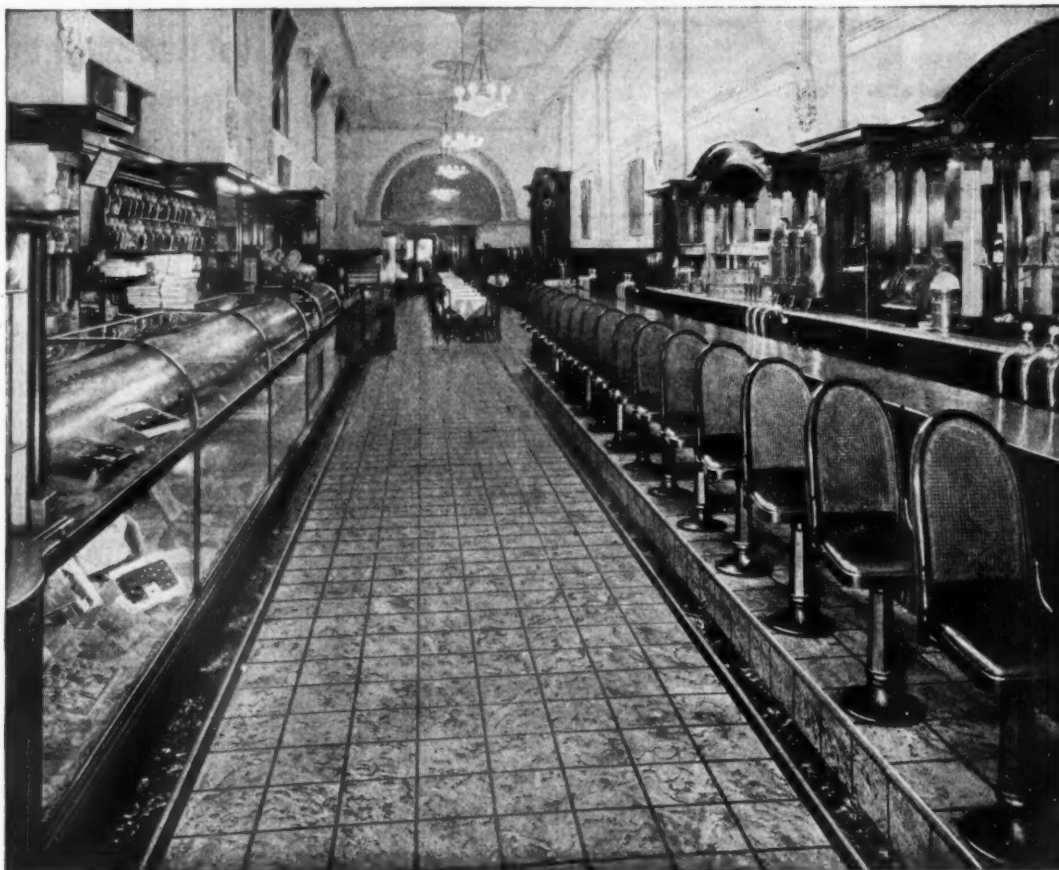
ALBRON

THE COAT OF  
METAL PROTECTION

ALCOA ALBRON  
POWDER FOR  
ALUMINUM PAINT



Post St. Store, San Francisco, Calif. One of the well-known Pig'n Whistle establishments.



## "NO SUCH THING AS AN UNTIDY WAITRESS ON A PIG'N WHISTLE FLOOR"

Mr. Sidney Hoedemaker speaking. This Vice-President of the Pig'n Whistle Corporation, with its chain of combination candy and food stores in California, is a great believer in tidiness and cleanliness. He feels that it pays to be "fussy" about them, for customers are attracted by their presence and repelled by their absence.

In his own chain, Mr. Hoedemaker lives up to his ideals. For example he says: "We insist that all waitresses pass a daily personal-appearance inspection. There can be no such thing as an untidy waitress on a Pig'n Whistle floor."

And—may we add—no such thing as an untidy floor in a Pig'n Whistle

restaurant. Cleanliness—combined with beauty, quiet and comfort underfoot—has been assured in the store illustrated above and in other links in the Pig'n Whistle chain by installing resilient floors of *Sealex* Linoleum.

The name *Sealex* means that these floors are made by the Sealex Process, which penetrates and seals every microscopic pore in the material. Consequently tracked-in dirt and spilled liquids (even hot grease) are easily mopped up and leave no stain on a floor of *Sealex* Linoleum or Tile.

CONGOLEUM-NAIRN INC.  
General Office: Kearny, N. J.

### BONDED FLOORS

You may obtain floors of *Sealex* Linoleum and *Sealex* Treadlite Tile, backed by a Guaranty Bond issued by the U. S. Fidelity and Guaranty Company. Authorized Contractors are located in principal cities.



# ATKINS

## Silver Steel SAWS



**SILVER STEEL**  
In 1857 when E. C. Atkins began making saws he realized that to make high grade saws it would be necessary to have a high grade steel. Being an expert metallurgist he set to work to find such a steel. After months of experimenting Silver Steel was born. This steel—Atkins exclusive formula—has the quality of receiving a hard, tough temper, a steel that takes a keen, sharp cutting edge and holds it longer than other saws.  
*Write for literature.*

**E. C. ATKINS & COMPANY, Inc.**  
"The Silver Steel Saw People" Established 1857  
Home Office and Factory, INDIANAPOLIS, INDIANA  
Canadian Factory, Hamilton, Ont. Machine Knife Factory, Lancaster, N. Y.  
Branches carrying complete stocks in the following cities:  
Atlanta, Chicago, Memphis, New Orleans, New York City, Portland, Ore., San Francisco, Seattle, Vancouver, B. C., Sydney, N. S. W., Paris, France

**Creosoted Ties, Piling, Poles and Timbers**

**Creosote Oil**

**Docks for Ocean Vessels**

**American Creosote Works, Inc.**  
New Orleans, La.

**Savannah Creosoting Co., Inc.**  
Savannah, Ga.

**Atlantic Creosoting Co., Inc.**  
Norfolk, Va.

**Delaware Wood Preserving Co.**

Sales Office: Finance Building, Philadelphia

Plant: Newport, near Wilmington, Delaware

### SERVICE

ALL forest products treated with  
all standard preservatives by  
all standard processes.

## Northern Hard Rock Maple Flooring

Holt Hardwood Co., Oconto, Wis.

MEMBERS OF MAPLE FLOORING MANUFACTURERS ASSOCIATION

SINCE 1879

# MOORE

## DRY KILNS

SCIENTIFIC LUMBER DRYING  
MOORE DRY KILN COMPANY  
NORTH PORTLAND, ORE. JACKSONVILLE, FLA.



### CREOSOTED TIMBERS

for all purposes

POLES    POSTS    PILING    BEAMS  
CROSS TIES    BRIDGE MEMBERS    MINE SHORING

Send for Catalogue

**Taylor-Colquitt Company**  
Spartanburg - - - South Carolina

## CALCASIEU

Long Leaf

Yellow Pine

*"Supreme Structural  
Wood of the World"*

MANUFACTURED BY

**INDUSTRIAL  
LUMBER COMPANY, INC.**

ELIZABETH

LA.

## Gulf States Creosoting Co.

PLANTS AT

HATTIESBURG, MISS., MERIDIAN, MISS., JACKSON, MISS.,  
SLIDELL, LA., BRUNSWICK, GA., BIRMINGHAM, ALA.

Main Office: HATTIESBURG, MISS.

### CREOSOTED MATERIAL

INCLUDING

Lumber, Timbers, Piles, Telephone and  
Telegraph Poles and Cross-Arms,  
Cross-Ties, Etc.

We also treat with Zinc Meta-Arsenite (colorless)



# STRENGTH THAT LASTS

~a Quality  
in Poles *that adds*  
*to earnings* by

1

*minimizing  
first cost*

2

*keeping the  
annual charges  
low*

3

*avoiding  
interruptions  
to service*

*The next page shows  
how AmCreCo poles  
provide such strength*







**25<sup>th</sup>**  
Anniversary  
1905-1930

Sound engineering practice recognizes the importance of future strength in the selection of all materials for use in permanent construction. When this fundamental principle is applied to poles as is done in our series of "Studies in Pole Line Design," results affecting the earnings of the property inevitably follow.

By taking full advantage of poles which not only have high initial strength but which also retain that strength practically constant over a long period, a saving is shown in the first cost of the line. When preference is given long-lived poles, the investment is spread over a longer period and annual charges for retiring the investment are therefore reduced. When reliance is placed on poles of high uniform quality, the result is bound to be less expense for emergency line repairs and less loss of business and of prestige through service interruptions. Good design, therefore, prompts the selection of poles with "strength that lasts" and AmCreCo poles can be demonstrated to have that quality.

#### Why AmCreCo Poles have "Strength that Lasts"

AmCreCo creosoted Southern Yellow Pine poles possess "strength that lasts" to an unexcelled degree because of their high initial strength and the proven quality of preservative treatment which they receive.

Southern Yellow Pine greatly exceeds in allowable fibre stress any other species of pole timber. Full length pressure treatment with creosote oil surpasses any other form of protection. And the high standard

## Good Design DOES Pay

of AmCreCo treatment is attested to by the most complete and extensive service records ever kept on creosoted products. This treatment is not cheap but the results prove that it is economical. This organization does

not resort to any questionable expedients in order to meet rush demands for poles. Our purpose is always to provide poles with ultimate maximum value. The factors contributing to this end include control of creosote oil supply, a technical staff of long experience, and seventeen plants strategically located for service.

**STRENGTH  
THAT  
LASTS**

#### Applicable to Any Line

The quality of "strength that lasts" is advantageous in poles for any type of service. For very light loads the size of pole may be dictated by practical considerations so that the line when first built uses only a part of the total strength of the poles. But when AmCreCo poles are used that margin of strength is maintained permanently and additional

circuits can be added later without any question as to the strength of the poles.

For heavily loaded lines all the strength desired can be provided without any extravagant excess of size in new poles or taking any chances on reduced strength in old poles.

In temporary lines the poles can be reset. In permanent lines the long life of AmCreCo poles is particularly fitting.

Whatever the conditions, these poles meet them economically because their structural characteristics are more uniform and more definitely determined.

Further data on pole line design is available in our "Studies in Pole Line Design," copy of which will be sent on request.

## AMERICAN CREOSOTING COMPANY

INCORPORATED

COLONIAL  
CREOSOTING  
COMPANY  
INCORPORATED



GEORGIA  
CREOSOTING  
COMPANY  
INCORPORATED

SALES OFFICES: CHICAGO NEW YORK CITY LOUISVILLE, KY. BRUNSWICK, GA. BOGALUSA, LA.  
GENERAL OFFICES: LOUISVILLE, KY.

# Color—

## *As Important for Buildings as for Commodities*

A striking and certainly a most successful step forward in Atlanta Terra Cotta is the development of Abbochrome Colors. They are new without being odd, they have texture without exaggeration, they have warmth and depth of tone, they have all the practical advantages of Atlanta Terra Cotta, and they add nothing to the cost.

Primarily intended for exterior facades they have proved remarkably adaptable for base colors in architectural polychromy. The varying color values of Abbochrome, the softness of texture and warmth of tone make the best possible background for colors.

Abbochrome colors are combinations of two or more harmonizing colors shaded and merged together. There is a long series: blended cream and ivory, tan and sienna, black and white, brown and buff, and many other combinations.



The texture is slightly rough and the surface dimly luminous. Wide variation prevents the monotony of flat colors, and the softly glowing surface is most attractive. When polychrome glazes are ap-

plied over an Abbochrome base they acquire the rough texture and variation of the Abbochrome. The result is refinement.

The advantages of Abbochrome Terra Cotta for interiors are apparent. In addition to its interesting texture and beauty of color the surface is impervious and consequently thoroughly sanitary. It never needs renovation and it can be easily kept clean with soap and water.

## Atlanta Terra Cotta Company

Citizens & Southern Bank Building

Atlanta, Georgia

Factory at East Point, Georgia

*Southern Factory of*  
Atlantic Terra Cotta Company  
19 West 44th Street  
New York

*Southwestern Office*  
A. P. Clark, District Manager  
Praetorian Building  
Dallas, Texas



Oil--Water--Gas Lines  
Hydro-Electric Penstocks  
Interior Hull Protection  
Tank Protection  
Concrete Waterproofing

**FOSTER I.B.M.** Impregnated Bituminous Materials  
PROTECTIVE COATINGS--PAINTS--CEMENTS

Write for Foster Catalogue

**BENJAMIN FOSTER COMPANY**

Manufacturers--Contractors--Distributors  
20th and Venango Streets PHILADELPHIA

Structural Steel Paints  
Industrial Paints  
Plastic Cements  
Floor Cements for  
Wood Block--Linoleum and Tile

**AMERICAN ELEVATORS**

PASSENGER AND FREIGHT

AMERICAN  
ELEVATOR and MACHINE CO., INC.

Established in 1898

LOUISVILLE, KENTUCKY

**Cement-Gun Construction Work**

THE RUST ENGINEERING CO.

Engineers and Contractors on all kinds of  
Cement-Gun Work

WOODWARD BUILDING, BIRMINGHAM, ALA.

New York Pittsburgh Washington Chicago

**THE CUTLER MAIL CHUTE**

In its perfected form--the outcome of long experience, designed to meet the requirements of public use under Postoffice Regulation. Simple and substantial in design and construction, durable in finish, with an artistic quality appreciated and much commended by Architects. \* \* \* Details, information on request.

THE CUTLER MAIL CHUTE COMPANY

General Offices and Factory ROCHESTER, N. Y.



**SCHOOL DESKS**

*The A. H. Andrews Co.*

CHICAGO

107 So. Wabash Avenue

Manufacturers Of  
ELECTRIC AND HAND POWER **ELEVATORS** FREIGHT AND PASSENGER  
DUMB WAITERS

**MILLNER COMPANY**

St. Louis, Mo.

WINDOW  
PLATE  
ART

**GLASS**

ESTABLISHED 1872

**BINSWANGER & Co.**

(INCORPORATED)

STORE FRONT CONSTRUCTION

MIRRORS  
BEVELING  
SKYLIGHT

Memphis,  
Tenn.

**Quality Machinery Deserves the  
RAYMOND**



The basic function of a spring is dependable, *unfailing* service. 40 years of service have proved Raymond Springs to be dependable.  
All Metals--Any Quantity.

*Machinery Springs of Quality*

**RAYMOND MFG. CO.**

CORRY, PA.



Designers, Manufacturers and Contractors

of  
**BLOW PIPE INSTALLATIONS**

also High Pressure Long Distance  
Blower Systems

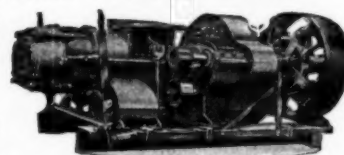
NATIONAL BLOW PIPE & MFG. CO., LTD.  
NEW ORLEANS, LA.

**CLAY WORKING MACHINERY**

For Brick, Tile and Block,  
from smallest to largest  
capacity

Write for catalogue.  
Full line equipment.

J. C. STEELE & SONS  
Statesville, N. C., U.S.A.



**MILLER FLUSH-TANK SIPHONS**

SIMPLE, RELIABLE, AUTOMATIC

Also Sewage-Disposal Apparatus, Automatic Sewage Ejectors,  
Convertible Diaphragm-Plunger Pumps, Sewer Jointing  
Compounds.

PACIFIC FLUSH-TANK CO.

Write nearest office for catalog interested in.  
4241 Ravenswood Avenue CHICAGO 9 Park Place NEW YORK

**THE GEORGIA MARBLE COMPANY**

Producers and Manufacturers of

**GEORGIA MARBLE**

Tate, Georgia

Atlanta Chicago Cleveland Dallas New York

**EVERY THURSDAY**

is publication day of the  
MANUFACTURERS RECORD.

Changes of copy must reach us eight  
days in advance, or fifteen days in  
advance if proofs are requested.

**MANUFACTURERS RECORD**

Baltimore, Maryland



# RESISTS CORROSION

## IN SOIL, WASTE, VENT LINES AND RAIN LEADERS



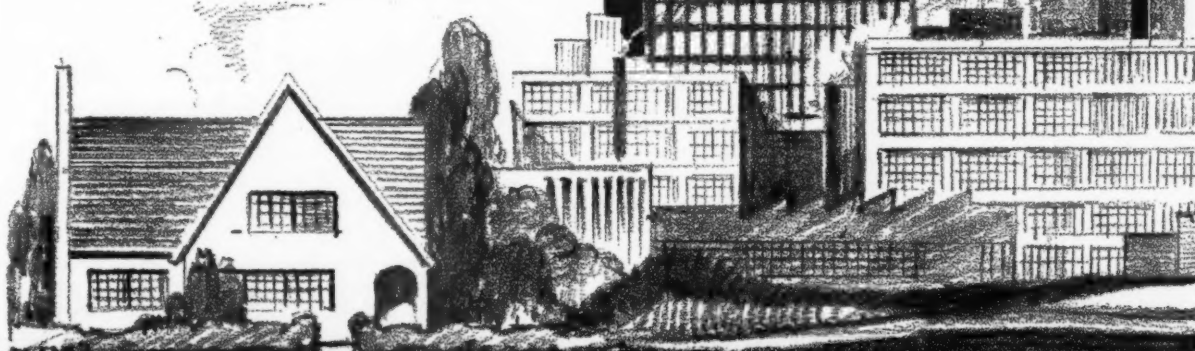
### COPPER-STEEL PIPE

**I**T is a known fact that a considerable portion of the piping used in such lines as soil, waste, vent lines and rain leaders in large buildings, factories and homes is exposed to conditions which approximate atmospheric corrosion. For all such purposes, NATIONAL Copper-Steel Pipe should be used to secure greater protection.

From the standpoint of economy, Copper-Steel Pipe offers the least expensive means of increasing the life of the pipe. Your judgment in installing this product will be backed by nearly twenty years of accumulated evidence that copper-steel adds years of extra life wherever piping is exposed to alternate wet and dry conditions. Ask for Bulletin No. 11, describing—

**NATIONAL COPPER-STEEL PIPE**  
*The Original Copper-Steel Pipe*

**NATIONAL TUBE COMPANY • Pittsburgh, Pa.**  
Subsidiary of United States Steel Corporation



# NATIONAL COPPER-STEEL PIPE



**Mathews Fire Hydrant**

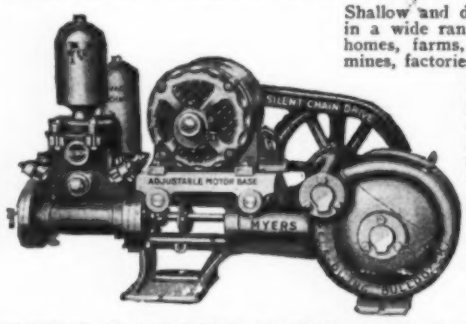
Because the entire barrel, with all parts, is removable, broken "MATHEWS" hydrants are easily replaced without digging.

CAST IRON PIPE and FITTINGS  
SAND SPUN (Centrifugally Cast)  
and PIT CAST  
GATE VALVES VALVE BOXES

**R. D. WOOD & CO.**  
PHILADELPHIA, PENNA.

"The Whole Works" Out in a Jiffy In business continuously since 1803

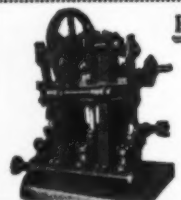
**MYERS SELF-OILING POWER PUMPS**




Shallow and deep well types in a wide range of sizes for homes, farms, estates, mills, mines, factories and innumerable other places. Recent improvements simplify installation and maintenance and give them greater sales and service values than ever before.

Write or Wire.

**THE F. E. MYERS & BRO. CO., Ashland, O.**  
PUMPS—WATER SYSTEMS—HAY TOOLS—DOOR HANGERS



**PLATT IRON WORKS - DAYTON, OHIO.**  
Smith-Vaile  Pumps

**STEAM and POWER PUMPING MACHINERY**

**SALT GLAZED SEWER AND CULVERT PIPE**

Wall Coping, Drain Tile, Flue Lining, Chimney Tops, Hollow Tile, Fire Proofing, Vitrified Brick, Fire Brick

**BANNON'S PATENT LIDDED PIPE FOR STEAM CONDUITS**

**BANNON PIPE CO. LOUISVILLE, KY.**

**SAND PUMPS**

A wide range of types in sizes 4" to 15"

For belt drive and for direct connection to motor

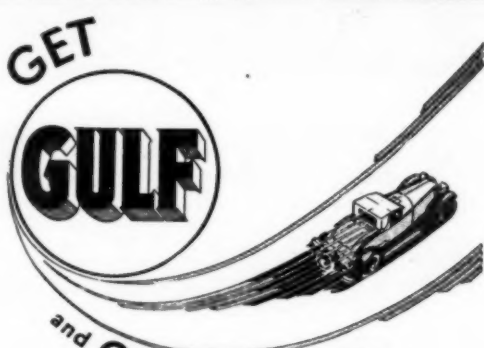
*Illustrated booklet on request*

**GEORGIA IRON WORKS**  
AUGUSTA, GA.

**ROTURBO CENTRIFUGAL PUMPS**

Manitowoc Iron Works Co., Manitowoc, Michigan

GET



and GET AHEAD

**POWER—PICK-UP MILEAGE**

400° F END POINT  
ANTI-KNOCK

AT NO EXTRA COST

GULF NO-NOX MOTOR  
FUEL is Aviation Grade  
374° F. End Point.

At the Sign of the Orange Disc

**GULF REFINING CO.**

**GLAMORGAN**

PIPE & FOUNDRY CO.

GENERAL FOUNDERS AND MACHINISTS  
LYNCHBURG, VA.

**CAST IRON PIPE - AND FITTINGS -**

American Cast Iron Pipe Company  
Birmingham, Ala.

SALES OFFICES IN PRINCIPAL CITIES

One-Fifth The Weight of Cast Iron Pipe



One-Third The Weight of Wrought Pipe

**AN ABSOLUTELY TIGHT DURABLE PIPE**

The lap riveted seam repeats its cycle every twelve inches, forming a broad-stiffening rib of great value, and makes Root pipe one-third stronger than any other type of pipe construction. Light weight and simple connections reduce transportation handling and erection costs. Suitable for conveying water, air, gas, exhaust steam and powdered coal.

**ABENDROTH & ROOT MANUFACTURING COMPANY**  
Pipe Specialists Continuously Since 1867. Sales Office: Woolworth Bldg., N. Y.

**UNIVERSAL CAST IRON PIPE**

THE CENTRAL FOUNDRY COMPANY

Graybar Bldg., 43rd St. and Lexington Ave., New York, N. Y.  
Chicago Birmingham Dallas San Francisco

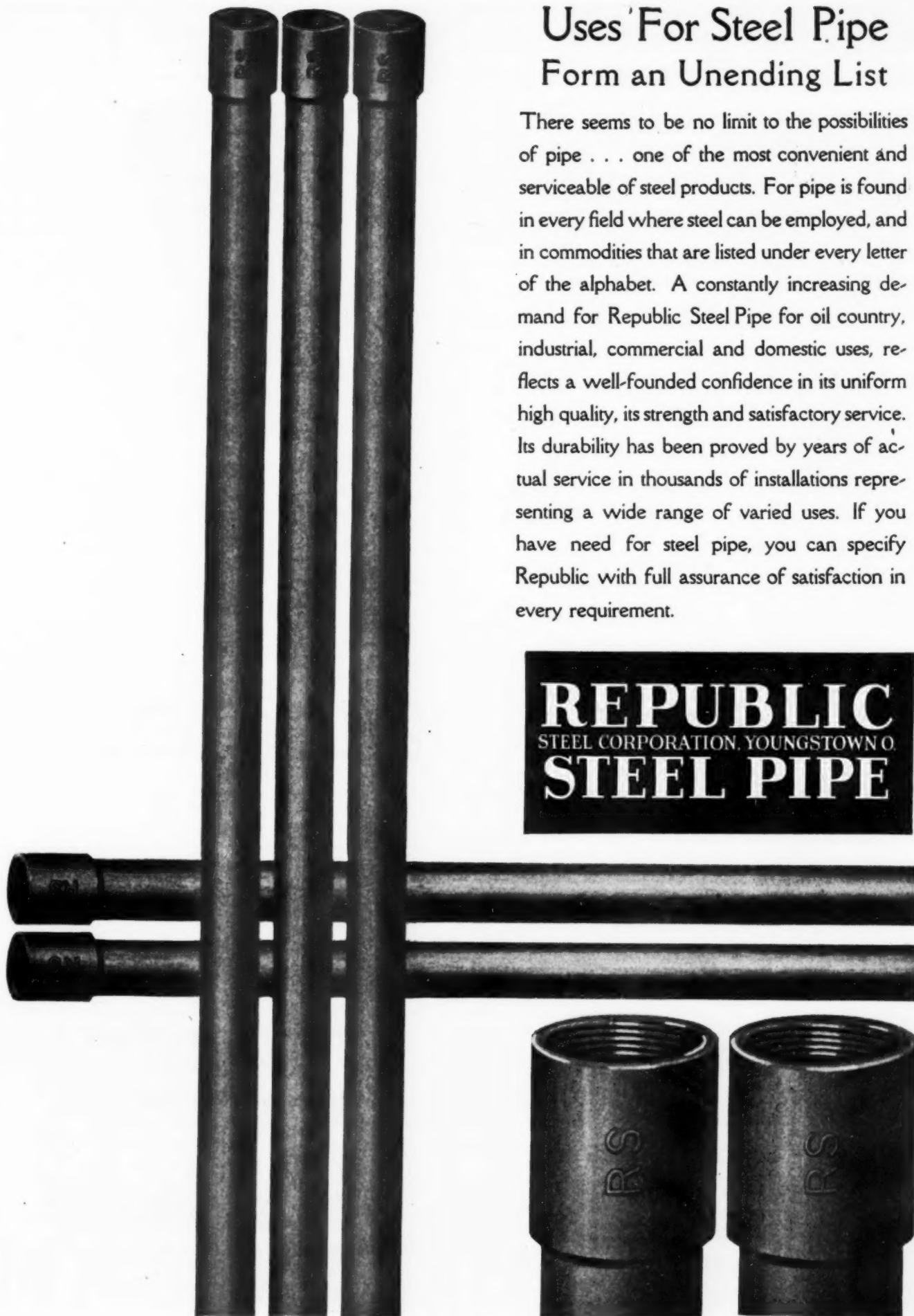
no packing no calking no bell holes



## Uses For Steel Pipe Form an Unending List

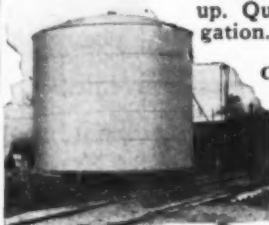
There seems to be no limit to the possibilities of pipe . . . one of the most convenient and serviceable of steel products. For pipe is found in every field where steel can be employed, and in commodities that are listed under every letter of the alphabet. A constantly increasing demand for Republic Steel Pipe for oil country, industrial, commercial and domestic uses, reflects a well-founded confidence in its uniform high quality, its strength and satisfactory service. Its durability has been proved by years of actual service in thousands of installations representing a wide range of varied uses. If you have need for steel pipe, you can specify Republic with full assurance of satisfaction in every requirement.

**REPUBLIC**  
STEEL CORPORATION, YOUNGSTOWN, O.  
**STEEL PIPE**



## Horton Storage Tanks

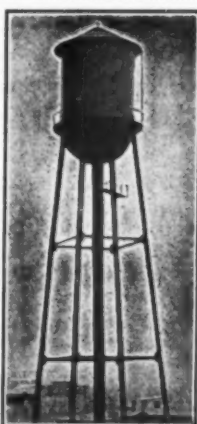
Field-erected storage tanks built in standard capacities from 25,000 gallons up. Quotations furnished without obligation.



### CHICAGO BRIDGE & IRON WORKS

Birmingham ....1530 Fifth St., North  
Atlanta .....1314 Rhodes-Haverty Bldg.  
Dallas .....3308 Magnolia Bldg.  
Cleveland .....2216 Union Trust Bldg.  
Chicago .....2106 Old Colony Bldg.  
New York .....3113 Hudson Terminal  
Detroit .....1510 Lafayette Bldg.  
Philadelphia .....1619 Jefferson Bldg.  
Boston .....1510 Consolidated Gas Bldg.  
San Francisco .....1040 Bialto Bldg.

Elevated Tanks -- Gas Holders -- Railroad Tanks  
Standpipes -- Storage Tanks -- Steel Plate Work



## SOUTHLAND PRODUCTS

STAND PIPES  
SMOKE STACKS  
TOWERS and TANKS  
STEEL RIVETED  
PIPE

Chattanooga Boiler & Tank Co.  
CHATTANOOGA, TENN.

82 Beaver St., New York City  
107-109 Kinney Bldg., Charlotte, N. C.

### TANKS



### What Makes a Good Tank?

It is the knowing how to design and construct a tank that will give good, long, honest, dependable service year in and year out without a hitch.

Caldwell Steel Tanks are the result. Engineers designed them according to approved engineering principles. A company with over thirty years of tank-building experience produces them.

Caldwell Steel Tanks are made of the finest steel and carefully riveted so that there's no chance for breaks or leaks.

These are but a few of Caldwell characteristics which contribute to the significance of our slogan—"The Tank With a Reputation."

Send for Catalog.

W. E. Caldwell Co., Incorporated  
1900 Brook St.,  
Louisville, Ky.

*Caldwell*  
TANKS  
AND  
TOWERS

## TANKS

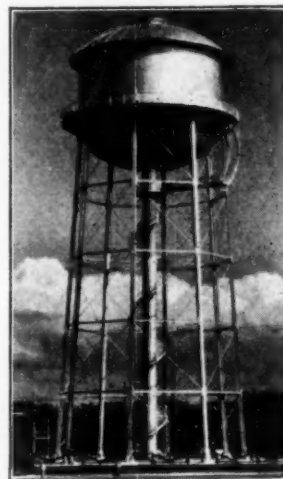
BOILERS ENGINES  
BARGES DRYERS  
and MACHINERY

BUILT TO ORDER

Write for Further Information

J. S. SCHOFIELD'S SONS CO.  
MACON, GA.

## COLE



### 500,000 Gallon Tank

erected for City of St. Petersburg, Fla. Cole tanks both in design and workmanship offer very distinctive advantages. They embody the most revised requirements of all insurance authorities.

♦ ♦ ♦

R. D. COLE MANUFACTURING CO.

Established 1854

NEWMAN, GA.

New York Office,  
5 Beekman St.

## STEEL TANKS

ANY SIZE FOR ANY PURPOSE

PITTSBURGH-DES MOINES STEEL COMPANY

11 NEVILLE ISLAND - PITTSBURGH, PA.

DES MOINES NEW YORK CHICAGO ATLANTA DALLAS SEATTLE SAN FRANCISCO



Biggs Welded or Riveted  
High Pressure Tanks,  
Vessels, Retorts, and Steel  
Plate Construction of  
every description. Write  
for folder shown at left.



THE BIGGS BOILER WORKS CO.  
Kent and Bank Streets, Akron, Ohio

## AIR-TIGHT STEEL TANK CO.

PITTSBURGH, PA.



TANKS FOR: High pressure gas and air storage—Pneumatic water systems—Gasoline and oil storage—Oil burning equipment—Open top—Welded. ATSCO Genuine Copper Brazen Tanks for high pressure — the tightest, safest, strongest tank it is possible to construct by any known process. ASME code tanks.

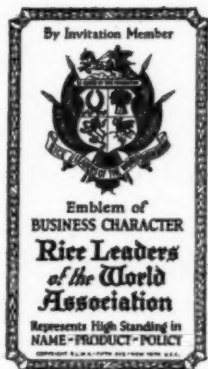




Photo by Victor Dalin, Lansdowne, Pa.

The Copyrighted Slogan tells the Story

## "The Sun Never Sets on Hammond Tanks"



**T**RAVELING through the air the land marks are changing. Every industrial center has its group of tanks. Where rails and steamships meet you will find Hammond Tanks. We present an aeroplane view of shipping point on Delaware River where Ocean Steamers unload their cargo.

*Send for our Bulletin No. 200*

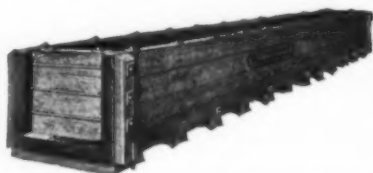
**HAMMOND IRON WORKS, Warren, Pa., U.S.A.**

**New York Office: 17 BATTERY PLACE**

**Telephone: Whitehall 0060**

# HAMMOND TANKS

## FOR PICKLING STEEL



**WOOLFORD  
WOOD  
TANKS**

With special designed acid sealed joints are proving what we claim—the best that are made. 4", 6", 8" material, any length, width and depth. Shipped set up or K. D.

*For over seventy years exclusive wood tank builders.*

**G. WOOLFORD WOOD TANK MFG. CO.**

Factory—Darby, Pa.

Mail—Paschall P. O., Phila., Pa.

## Latest Improved McLanahan Single Roll Crushers.

**Simplicity — Power — Economy**

Built in any capacities up to 1500 tons per hour, for any material.

Low power consumption—no feeders necessary on wet or dry materials—easily repaired. Crushes 100% of the time to desired size. Minimum of fines and dust. Steel or iron construction as desired.

*Write for catalogs and information on Pit, Mine, Quarry and Industrial Equipment, washers, ore jigs, screens, dryers, hoists, etc.*

**McLanahan and Stone Machinery Co.**

Hollidaysburg, Pennsylvania.



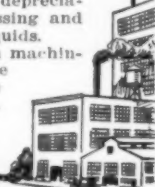
Some especially desirable attributes must surround Davis Tanks—when you realize that leading manufacturers and railroads of the South have bought them repeatedly for 12 years. In truth, there are two reasons:

1. Cypress is unequalled for durability, low depreciation and varied usefulness in storage, processing and handling chemicals and other liquids.

2. Davis tanks, built by modern machinery and skilled men, can be made to fit any factory need, in any size and shape. Catalog on request.

**G. M. DAVIS & SON**

P. O. Box 5, Palatka, Florida



*'You Can't go wrong in a Day'*

IF YOU HAVE A CRUSHING OR GRINDING PROBLEM WRITE FOR INFORMATION ON 'DAY' PATENT HAMMER-MILL CRUSHERS

**DAY PULVERIZER CO. KNOXVILLE TENN.**



No. 1



No. 3

**MANHATTAN**

**PERFORATED METAL CO., INC.**

43 17-37th Street, Long Island City, N. Y.

**PERFORATORS**

of All Kinds of Metals for All Industries

Write for Copper, Brass, Tin, Zinc or Aluminum Catalog



No. 7



No. 22

## MECKLENBURG IRON WORKS

Founded 1858

**Consulting Engineers**

Sheet and Plate Steel Construction  
Smoke Stacks and Connections

Tanks — Water, Oil, Gasoline, Dye  
Boilers and Boiler Flues

**CHARLOTTE, N. C.**



## Perforated Metal Screens for every purpose

also elevator buckets MITCO Products—In of all kinds; chutes; terlocked Steel Grating; hoppers; stacks and Shur-Site Stair Treads; tanks. Armorgrids.

**HENDRICK MANUFACTURING CO.**

44 Dundaff St., Carbondale, Pa.

New York: 30 Church St.

Pittsburgh: Koppers Building

## Perforated Metals SCREENS OF ALL KINDS

**Chicago Perforating Co.**

2445 West 24th Place

Tel. Canal 1450 CHICAGO, ILL.



## PERFORATED METALS HEADQUARTERS

Cotton Seed Oil Works a Specialty

Send for Samples

**ERDLE PERFORATING CO.**

Rochester, N. Y.

## PERFORATED SCREEN PLATES AND SHEETS

For Ores, Coal, Stone, Gravel, Cement, Sand, Clay, Cotton-Seed Oil Mills, Cotton Gins, Phosphate Mines, Fertilizer Plants, Cyanide Works, Chemical Works, Etc.

*Write for our New Catalogue*

**CHARLES MUNDT & SONS**

490 Johnston Avenue

**JERSEY CITY, N. J.**





OFFICE OF  
THE CITY MANAGER

January 23, 1930.

Manufacturers Record,  
Baltimore, Maryland.

Gentlemen:

Indeed the Manufacturers Record, I know, has been ever alert to the progressive movement in the South looking to the progression and upbuilding of this great section of the United States. It is rather stimulating to know that we have such an optimistic and intelligent organization at work in behalf of this section of our country at large.

May your good efforts continue.

Yours very truly,

Welton A. Snow  
City Manager

S:L:L

# DIRECTORY

ARCHITECTS

ENGINEERS

CHEMISTS

GEOLOGISTS

CHEMICAL ENGINEERS

ACCOUNTANTS

CONTRACTORS

Detailed classification of specialized work undertaken by those having cards in this Directory will be found in Classified Index.

**Milburn, Heister & Co.**

Architects

WASHINGTON, D. C.

**Wm. J. J. Chase, A. I. A.**

Architect

Public and Commercial Buildings  
140 Peachtree St. ATLANTA, GA.**Geo. Harwell Bond**

—A-I-A—

ARCHITECT

Candler Building ATLANTA, GEORGIA

**G. Lloyd Preacher & Co., Inc.**

Architects and Engineers

1204 Wynne Claghton Bldg.,  
ATLANTA, GA.**Chas. T. Main, Inc.**

Industrial Engineers

Mills, Warehouses, Complete Develop-  
ments  
Electrical, Steam and Water Power  
Reports—Appraisals  
201 Devonshire St. BOSTON, MASS.**Claude H. Lindsley**

Architects

Member American Inst. of Architects  
JACKSON, MISS.**E. S. Draper**

Landscape Architect and Engineer

Fellow American Society of  
Landscape Architects1516 S. 4th St., CHARLOTTE, N. C.  
101 Marietta Bldg., ATLANTA, GA.**Wendell P. Miller**

and Associates

AIRPORT DRAINAGE SPECIALISTS  
Engineers—Contractors  
105 W. Monroe St., CHICAGO  
85 E. Gay Street, COLUMBUS, O.**B. Russell Shaw Co.**

INCORPORATED

Consulting and Designing Engineers  
AIRPORTS—AIRLINES

Arcade Bldg., ST. LOUIS, MO.

**James D. Lacey & Co.**

Timberland Factors

Forest Engineering—Management  
Aerial Surveys—Timber Reports  
350 Madison Avenue, NEW YORK  
231 So. La Salle St. CHICAGO  
JACKSONVILLE — NEW ORLEANS**Airmap Corporation of America**

Aerial Surveys and Maps

Consultants and Engineers

The AIRMAP—The Engineer's Aerial  
Map for City Planning, Water  
Supply Studies, Zoning,  
Complete Aerial Tax Map Service  
42 Flatbush Extension BROOKLYN, N.Y.**Invicta Engineering Company**

Research and Development

Industrial Processes

Mechanical Inventions

Competent engineering service to plants  
without engineering departments and  
to individuals requiring such service.  
P. O. Box 2494 BIRMINGHAM, ALA.**Ira G. Hedrick, Inc.**

Mem. A. S. C. E.

Consulting Engineer

Designs, Supervision, Estimates, Bridges  
and Structural Work.

HOT SPRINGS NAT'L PARK, ARK.

**Wadleigh and Bailey**

Consulting Mining Engineers

Management, Investigation, Appraisal of  
Mining Properties.  
Fuel Consultants, Natural Resource  
Surveys.  
One Broadway, NEW YORK, N. Y.  
Southern Bldg., WASHINGTON, D. C.**Charlton & Davis**

Civil Engineers

General Engineering Practice

Local Maps for Sale

FORT LAUDERDALE, FLA.

**George B. Hills Co.**

Drainage, Docks and Terminals

Suite 314 Liggett Bldg.  
JACKSONVILLE, FLA.**Elroy G. Smith**

Consulting and Designing

Civil-Hydraulic Engineer

Industrial Hydro-Electric Development  
a Specialty  
313-313-A Herald Bldg.,  
AUGUSTA, GA.**Consoer, Older & Quinlan, Inc.**

Mems. A. S. C. E.

Consulting Engineers

Water Supply—Sewerage—Industrial  
Engineering  
317 N. 11th St. ST. LOUIS, MO.  
205 W. Wacker Drive, CHICAGO, ILL.**Harza Engineering Co.**

Consulting Engineers

Dams, Hydraulic, Hydro-electric, Flood  
Control and Sanitary Projects  
20 N. Wacker Drive  
CHICAGO**J. E. Greiner & Company**

Consulting Engineers

Design, Construction, Investigation, Ad-  
visory Service—Bridges, Docks, Piers,  
Warehouses and other Engineering  
Structures.  
1201 St. Paul St. BALTIMORE, MD.**C. A. P. Turner**

Consulting Engineer

M. Am. Soc. C. E. Reinforced Concrete  
and Structural Steel Bridges, Buildings,  
and Manufacturing Plants.300 Builders Exchange Bldg.,  
MINNEAPOLIS, MINN.**Walter H. Wheeler**

M. A. S. C. E. and M. E.

Engineers

Mfg. Plants, Buildings, Bridges, Dams,  
1000 Met. Life Bldg.,  
MINNEAPOLIS, MINN.**Arthur L. Mullergren**

Consulting Engineer

POWER SPECIALIST

770 Board of Trade Building  
KANSAS CITY, MO.**Widmer Engineering Co.**

Industrial Engineers

ST. LOUIS, MO.

**C. N. Harrub Engineering Co.**

Member Am. Soc. C. E.

Civil and Sanitary Engineers

Water Supply, Sewerage, Paving and  
Structural Improvements.  
705-9 Fourth & First Nat'l Bk. Bldg.  
NASHVILLE, TENN.**Fuller & McClintock**

Engineers

170 Broadway, NEW YORK  
Penna. Bldg., 15th and Chestnut Sts.,  
PHILADELPHIA, PA.  
Walsh Bldg., 600 Walnut St.,  
KANSAS CITY, MO.**Charles H. Herty**

Industrial Consultant

Special attention given to the location  
and development of industries utilizing  
the natural resources of Southern States,  
especially as affected by Chemistry.  
101 Park Avenue, NEW YORK CITY**William S. Lee**Mem. Am. Soc. C. E.; Mem. Am. Soc.  
M. E.; Mem. Eng. Inst. Can.; Fellow  
Am. Inst. E. E.

Consulting Engineer

535 Fifth Ave. NEW YORK CITY  
CHARLOTTE, NORTH CAROLINA**MacElwee & Crandall, Inc.**

Industrial and Civil Engineers

Investigations, Reports, Design, Super-  
vision—Port Development, Piers, Ter-  
minals, Airports, City Planning, Water  
Front, Reclamation, Industrial Surveys  
Main Office: 11 West 42d Street  
CAMBRIDGE, MASS. NEW YORK CITY**Howerton Engineering Co.**

Consulting and Contracting Engineers

MUNICIPAL IMPROVEMENTS

HIGHWAY IMPROVEMENTS

Water Works, Sewer, Hard Surface  
Streets, Highways, Contracting Con-  
struction. ASHEVILLE, N. C.**Gilbert C. White Co.**

Consulting Engineers

Waterworks Paving

Sewerage

CHARLOTTE, N. C.  
DURHAM, N. C.**William M. Piatt**

E. E. M. S.

Civil, Hydraulic and Electrical Engineer

P. D. DAVIS W. D. LINTON  
W. B. GALLAGHER, JR. H. P. REDDING  
G. A. HARRIS P. A. J. RICE  
FONTAINE JONES P. A. ROBERTS  
D. M. WILLIAMS DURHAM, N. C.**Morris Knowles, Inc.**

Engineers

Water Supply and Purification, Sewer-  
age and Sewage Disposal, Valuations,  
Laboratory, City Planning.

PITTSBURGH, PA.

**W. E. Biggs Engineering Co.**

Consulting Engineers

Power Plants and Industrial power ap-  
plications. Economic use of power and  
process steam.Heating and Ventilating  
Design—Supervision—Operation  
Holston Bank Bldg.,  
KNOXVILLE, TENN.**Gardner & Howe**

Structural Engineers

Steel and Reinforced Concrete Buildings,  
Bridges and ViaductsPorter Bldg. MEMPHIS TENN.  
Kirby Bldg. DALLAS, TEXAS**Freeland, Roberts & Co.**

Consulting Engineers

Concrete and Steel Structures

NASHVILLE, TENN.

**Engineering Service Corp.**

Consulting Engineers

Civil-Electrical-Mechanical-Refrigeration  
COLD and DRY STORAGE WAREHOUSES  
DESIGNS  
Reports—Appraisals—Designs—Surveys  
Docks and Harbor Designs—Ind. Engr.  
Water Sup.-Sewer Sys.-Oil and Gas Lines  
HOUSTON, TEXAS, U. S. A.**Lee H. Williamson**

MEM. AM. SOC. C. E.

Consulting Engineer

CHARLOTTESVILLE, VA.

**Algernon Blair**

Contractor

MONTGOMERY, ALA.

**Hornbuckle Contracting Co.**

INCORPORATED

Municipal Improvements

Industrial Village Utilities

ATLANTA, GA.

**S. P. Rees**

Contracting Engineer

Municipal—Industrial—Swimming Pool  
Gravity and Pressure Filter and  
Softening Plants  
137 Huntington Road ATLANTA, GA.**S. E. Huey**

Consulting Engineer

Natural Gas

Ouachita Bank Bldg. MONROE, LA.

**Kansas City Bridge Co.**

Established 1893

Builders of Railroad and  
Highway Bridges  
River Improvement Work  
General Office, 1012 Baltimore Ave.,  
KANSAS CITY, MO.**T. C. Thompson and Bros.**

Incorporated 1895

General Contractors and Builders  
BIRMINGHAM, ALA.  
CHARLOTTE, N. C.**Industrial Electrical Company**

Contracting Electrical Engineers

SAVANNAH, GA.

**Angle-Blackford Company**

General Contractors

GREENSBORO, N. C.

**Fiske Carter Construction Co.**

General Contractors

GREENVILLE, S. C.

SPARTANBURG, S. C.

**Poe Piping & Heating Co.**

Contractors

For Power Piping, Heating and  
Sprinkler System  
108 S. Main St. GREENVILLE, S. C.



**Lee A. Gridley Construction Co.**

General Construction

CRANE SERVICE—FOUNDATIONS  
KNOXVILLE, TENN.**Steel & Lebbey**JOHN A. STEEL, JR.  
THOS. D. LEBBEY

Engineers and Constructors

The design and erection of concrete and steel structures.  
Holston Bank Building  
KNOXVILLE, TENN.**The Warner Service Company**Electrical and Mechanical  
ContractorsCor. Clinch and Central Ave.  
KNOXVILLE, TENN.**Charles W. Alpaugh & Sons**

Hydraulic and Construction Engineers

Dams a Specialty: Investigations,  
Estimates Free.

MANASSAS, VA.

**Charleston Constructors, Inc.**H. C. Cheves, Jr., President  
J. A. McCormack, Secy. & Treas.  
C. M. Trott, Engineer58 Broad Street  
Phone 3462 CHARLESTON, S. C.**Floyd Jennings & Co., Inc.**

Plastering Contractors

132 Cain St., N. E., ATLANTA, GA.

**John Eichleay, Jr. Co.**Steel Construction  
Structural Steel  
House Raising and Moving  
Shoring and Foundation Work  
South 20th & Wharton Sts.  
PITTSBURGH, PA.**Walker Electrical Company**

Electrical Contractors

General Offices: ATLANTA, GA.

Sales Offices:

ATLANTA, GA. COLUMBUS, GA.  
GREENSBORO, N. C.**J. B. Converse & Co., Inc.**

Engineer

Industrial Investigations, reports,  
plans, estimates, supervision.

MOBILE, ALA.

FAMILIARIZE yourself  
with the SOUTH'S pro-  
gress by reading the MANU-  
FACTURERS RECORD.**O. F. Williams, Inc.**

QUANTITY SURVEYS

502 Builders Bldg. CHARLOTTE, N. C.

**William Henry Harrison**

Engineer

Tax Valuations, Commercial Appraisals,  
and Analytical Reports.

Denrike Bldg. WASHINGTON, D. C.

**E. T. Le Baron, C. P. A.**

Member Florida Institute of Accountants

Admitted to practice before the

Treasury Department

Audits. Systems. Taxes.

JACKSONVILLE, FLA.

**The Picard Laboratories**

Chemists and Inspecting Engineers

Inspection of Cast Iron Pipe, Structural  
Steel, Cement, Railroad Equipment, etc.  
Chemical Analysis of all kinds.Representation in all Principal Cities  
Clark Building, BIRMINGHAM, ALA.**Conard & Buzby**W. R. CONARD J. S. BUZBY  
Inspection and Tests of Materials of  
Engineering and Construction  
Reports, Designs, Supervision  
Construction

BURLINGTON, N. J.

**Wiley & Company, Inc.**Analytical and Consulting Chemists—  
Experts on Fertilizer Materials, Coal,  
Greases, Food, Drugs, Dairy Products,  
Chemical and Bacteriological Examina-  
tions. Water for Domestic and Manu-  
facturing Processes.

Calvert and Read Sts. BALTO., MD.

**Dow & Smith**A. W. Dow, Ph.B.; F. P. Smith, Ph.B.  
Mem. Am. Inst. Ch. Engrs.  
Mem. Am. Soc. Civ. Engrs.  
Chemical Engineers, Consulting Paving  
Engineers, Asphalts, Bitumens, Cement,  
Paving Materials

131 East 33rd St. NEW YORK

**Stil'man & Van Sieten, Inc.**

Chemists and Chemical Engineers

Analysis and Inspection of Asphalt,  
Paving Materials, Cement, Concrete  
Building Materials.227 Front Street NEW YORK  
BEFkman 5261**Barrow-Agee Laboratories, Inc.**

Chemists and Engineers

Analysis tests and inspection of all  
building and construction materials.MEMPHIS, TENN.  
LITTLE ROCK, ARK.  
JACKSON, MISS. SHREVEPORT, LA.**Hoosier Engineering Co.**Erectors of Transmission Lines and  
Substations

100 W. Monroe St. CHICAGO, ILL.

**The J. B. McCrary Company**

Engineers

ATLANTA

GEORGIA

MUNICIPAL IMPROVEMENTS

We design and construct Water-Works, Electric-light and Sewer Systems—Paving  
and Road Work.**Batthey & Kipp**

Incorporated

Consulting and Constructing Engineers

Industrial Plants Power Plants  
Railroad Shops, Terminals and Electrification  
231 S. La Salle Street CHICAGO, ILL.**James W. Billingsley**

Consulting Engineers

Investigations—Plans—Specifications and Supervision  
Industrial Plants—Docks—Seawalls—Roads—Bridges and Municipal Work.  
NEW ORLEANS, LA.**Spoon & Lewis**

Consulting Engineers

Water Works, Sewerage Works, Streets, Bridges, Industrial Plants,  
Highways, City and Land Development, Port Development, Harbor Works,  
Investigations—Designs—Supervision of Construction  
GREENSBORO, N. C. BOSTON, MASS.**Fay, Spofford & Thorndike**

Associates

Consulting Engineers

**SANDERSON & PORTER**

ENGINEERS

FOR THE

FINANCING—REORGANIZATION—

DESIGN—CONSTRUCTION

OF

INDUSTRIALS and PUBLIC UTILITIES

CHICAGO

NEW YORK

SAN FRANCISCO

**The J. G. White Engineering Corporation**

Engineers—Constructors

43 Exchange Place

NEW YORK

**Scofield Engineering Company**

Consulting Engineers

POWER AND INDUSTRIAL PLANTS AND PROCESSES.

Design—Construction—Valuations.

Commercial Trust Bldg.,

PHILADELPHIA

**Mees & Mees, Inc.**

Engineers and Industrial Architects

Reports, Designs, Supervision of Construction, Appraisals,  
DAMS—POWER PLANT—MUNICIPAL IMPROVEMENTS

INDUSTRIAL PLANTS

616 Johnston Building

CHARLOTTE, N. C.

**Wiley & Wilson**

Consulting Engineers

PLANS, SPECIFICATIONS AND SUPERVISIONS  
STEAM AND ELECTRIC POWER PLANTS  
STEAM HEATING AND VENTILATING SYSTEMS  
Complete Mechanical and Electrical Equipment for Public and Private Buildings  
and for Institutional Groups  
MAIN OFFICE: LYNCHBURG, VA. BRANCH OFFICE: RICHMOND, VA.**J. E. Serrine & Company**

Engineers

Factory Design: Hydro- and Steam-Electric Plants; Warehouses,  
Steam Utilization, Sewage Systems, Appraisals, Valuations, Reports.

General Offices: GREENVILLE, SOUTH CAROLINA

**Floyd & Lochridge**

Consulting Engineers

Hydraulic Investigations, Water Supply, Irrigation, Flood Control, Drainage  
Dams, and Power Development.

Investigations for Financial Institutions.

Wilson Building

DALLAS, TEX.

**Cornell-Young Company**

Incorporated

General Contractors

Railroads and Highways, Reinforced Concrete and Steam Shovel Work.  
704 Georgia Casualty Bldg. MACON, GEORGIA.**Wiedeman and Singleton, Inc.**

(Successors to Paul H. Norcross)

Consulting Engineers

WATER WORKS, SEWERS, SEWAGE DISPOSAL

APPRAISALS, VALUATIONS, REPORTS

Candler Building

ATLANTA, GA.

**Hardaway Contracting Company**

Engineers

Contractors

Water Power Developments, Bridges

COLUMBUS, GEORGIA.

**Bylesby Engineering & Management Corporation**

231 S. La Salle Street

CHICAGO

NEW YORK

SAN FRANCISCO

# DIRECTORY

ARCHITECTS

ENGINEERS

CHEMISTS

GEOLOGISTS

CHEMICAL ENGINEERS

ACCOUNTANTS

CONTRACTORS

Detailed classification of specialized work undertaken by those having cards in this Directory will be found in Classified Index.



## Lockwood Greene Engineers, Inc.

*Plans—Specifications—Reports—  
Appraisals—for Industrial Plants*

NEW YORK BOSTON CHICAGO CLEVELAND  
CHARLOTTE SPARTANBURG

## Ford, Bacon & Davis Incorporated Engineers

39 Broadway, New York

Philadelphia Chicago San Francisco

## Frederick Snare Corporation

Contracting Engineers

Difficult Foundations and Engineering Problems a Specialty

114 Liberty Street

New York

PHILADELPHIA

HAVANA

## Tucker & Laxton

Contracting Engineers

Filters, Concrete Work, Hydro-Electric and Steam Electric Construction.

CHARLOTTE, NORTH CAROLINA

## Hollowell, Gorham & Company

Auditors, Accountants, Industrial Engineers

COST SYSTEMS—AUDITS—TAX SERVICE

Special Investigations for Consolidations, Reorganizations, etc.

GREENSBORO, N. C. ROCKY MOUNT, N. C.

## Webb Electric Company

Electrical Contractors

Industrial, Commercial and Institutional

Electrical Installations.

ANDERSON, S. C.

## Allen J. Saville, Inc.

ENGINEERING AND CONSTRUCTION

Electric Building

RICHMOND, VIRGINIA

## The John W. Cowper Co., Inc.

General Contractors

State Planters Bank Bldg.

RICHMOND, VA.

## Dixie Electro Plating Co.

RUST PROOFING ENGINEERS AND CONTRACTORS  
UDYLITE PROCESS

PLANT CAPACITY PRACTICALLY UNLIMITED

Office and Plant

217 Caroline Street

HOUSTON, TEXAS

## B. Stanley Simmons, Inc. and Associates

A. I. A.

Architects

PUBLIC AND COMMERCIAL BUILDINGS

1215 H Street, N. W.

WASHINGTON, D. C.

NEW YORK OFFICE: Fifth Ave at 47th Street

## The Ballinger Company

Architects Engineers Appraisers

Commercial, Industrial and Institutional Buildings

PHILADELPHIA

NEW YORK

## Tilghman Moyer Company

Bank Architects and Builders

ALLENTOWN

PENNSYLVANIA

## Dame-Wolfe & Co.

INDUSTRIAL SURVEYS—FINANCING—  
MANAGEMENT

815 15th St., N. W.

WASHINGTON, D. C.

## W.E. Rowan

QUANTITY SURVEYS

215 Builders Building

CHARLOTTE, N. C.

## Robert W. Hunt Company

ENGINEERS

Inspection—Tests—Consultation

22nd FLOOR INSURANCE EXCHANGE, CHICAGO

Laboratories and Offices in all Large Cities

## Walter H. Flood & Co.

Chemical Engineers

Inspection and Tests

Paving and Engineering Materials

Plant and street inspection on all types of pavements. Reports, specifications, consultation.

932 E. 44th St.,  
CHICAGO, ILL.321 Daniel Building  
JACKSON, MISS.

## Pittsburgh Testing Laboratory

ANALYSIS INSPECTION TESTING RESEARCH  
PITTSBURGH, PA.

Branch Offices in the Principal Cities

Established 1881

## Froehling and Robertson, Inc.

Inspection Engineers and Chemists

Inspection of Cement, Steel, Pipe, Timber, Brick, Tile

Design and control of Asphalt and Concrete Mixture.

Water Analysis a Specialty.

ATLANTA

BALTIMORE

NEW YORK

RICHMOND

## Southwestern Laboratories

Chemical and Testing Engineers

Inspection Steel and Cement for Bridges and Buildings. Croosoted Timber, Asphalt, Brick, Cast Iron Pipe, Railroad Equipment, Bituminous Pavement at Plant, Chemical Analyses, Etc. Representation at usual points of origin.

FORT WORTH

DALLAS

HOUSTON

AMARILLO

## Courtenay De Kalb

Mining Engineer and Economic Geologist

Reports on Mineral Products

Design and Advice on Treatment Plants for Ores and Non-Metallic Products  
15 Gramercy Park

NEW YORK, N. Y.

## Sprague & Henwood, Inc.

Core and Wash Borings

For Buildings, Bridges, Dams and all kinds of Minerals  
Anywhere in the United States or Canada

Main Office

SCRANTON, PENNA.

## Mott Core Drilling Company

Diamond Core Drill Contractors

We Test Coal, Clays, and Mineral Properties, Foundation Testing, Dams, Bridges, Buildings, Wash Borings, Dry Samples.

MAIN OFFICE

HUNTINGTON, W. VA.

**I**f you wish to keep posted on the progress of the South, read the MANUFACTURERS RECORD.



LOUISVILLE & NASHVILLE  
RAILROAD  
Louisville, Ky.  
*Office Building Extension*



## .. Satisfaction .. Efficiency and Economy

### UNITED ENGINEERS & CONSTRUCTORS, INC.

#### *combining*

Dwight P. Robinson & Co., Inc.  
Day & Zimmermann  
Engineering & Construction Co.  
The U. G. I. Contracting Co.  
Public Service Production Co.  
United Engineers & Constructors  
(Canada) Ltd.  
Dwight P. Robinson & Company  
of Argentina, Inc.  
Dwight P. Robinson & Company  
of Brazil, Inc.

#### *Design and Construct*

INDUSTRIAL PLANTS  
STEAM POWER STATIONS  
HYDRO-ELECTRIC  
DEVELOPMENTS  
RAILROAD WORK  
GAS PLANTS

#### *Build*

APARTMENTS  
HOTELS  
OFFICE & MONUMENTAL  
BUILDINGS

"I DESIRE to take this opportunity to express to you the satisfaction we have received from the manner in which this important piece of construction was handled by your people, and the efficient manner in which the building was constructed, and particularly the saving below the estimates which you have been able to accomplish."

Built under the direction and from the plans of the engineering department of the Louisville & Nashville Railroad Company, William H. Courtenay, Chief Engineer and J. C. Haly, Architect.

### UNITED ENGINEERS & CONSTRUCTORS INCORPORATED

DWIGHT P. ROBINSON, PRESIDENT

PHILADELPHIA

NEW YORK

NEWARK

CHICAGO

LOS ANGELES

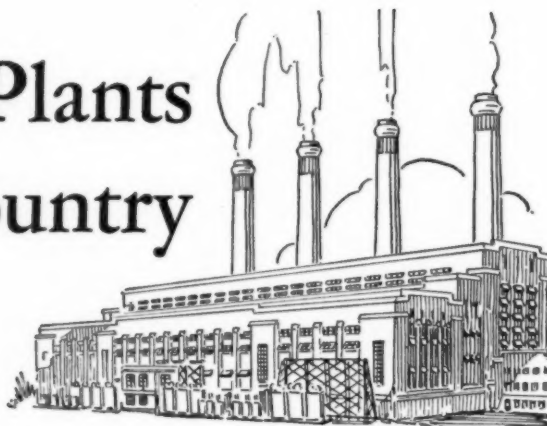
MONTREAL

BUENOS AIRES

RIO DE JANEIRO

**MAXIMUM RETURN TO CLIENTS PER DOLLAR INVESTED**

## Only Five Such Plants in the Country



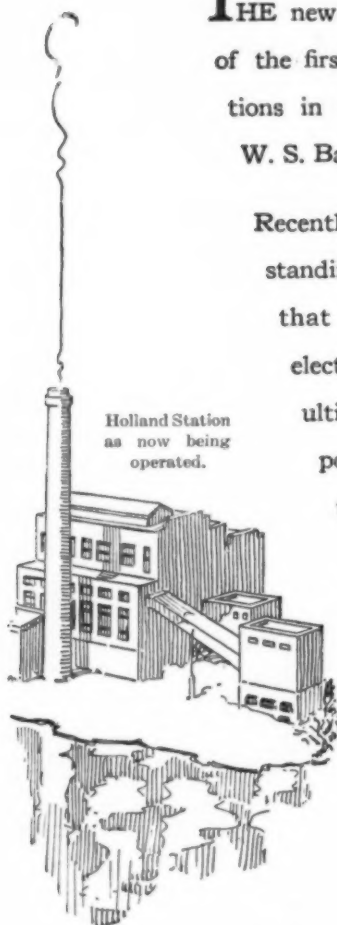
Holland Station  
as completed to  
ultimate capa-  
city.

**T**HE new Holland Station near Easton, Pa., one of the first super pressure steam generating stations in the country was designed and built by W. S. Barstow & Company.

Recently placed in operation, this station is an outstanding example of Barstow engineering, and of all that is modern and economical in generating electricity by steam. Designed for 220,000 kilowatt ultimate capacity, it has centralized control, burns powdered fuel, and has many other important features that increase operating efficiency.

Our construction booklet, showing this and other engineering and construction projects we have completed, will be forwarded on request.

Barstow engineers will be glad to consult with you on any engineering or construction you may have in mind.



Holland Station  
as now being  
operated.

### W. S. BARSTOW & COMPANY, INC.

*Engineering—Design—Construction*

120 Wall Street  
New York City

412 Washington St.  
Reading, Pa.





GALVESTON—AMERICA'S PORT

OF QUICKEST DISPATCH



# VIA GALVESTON

*to or from any port in the world*

SIXTY-EIGHT shipping lines, flying the flags of 14 nations, operate vessels out of Galveston to far-flung ports of the world. From this great Southwestern port go cargoes bound for almost a hundred and fifty foreign harbors—cotton for Liverpool, Kobe, Bremen and Murmansk; sulphur for Harburg, Melbourne and Manchester; wheat for Antwerp, Piraeus, Genoa.

To Galveston come cargoes of bagging from Calcutta, paper from Sundsvall, sugar from Cuba, bananas and petroleum from Mexico, coffee from Santos, creosote from Amsterdam—raw materials and manufactured products from more than sixty foreign shipping points.

Let us put your name on our free subscription list for the "Shippers Digest of Galveston," published weekly. Full sailing lists of vessels in the coastwise and foreign trade. News of cotton, grain, flour, sulphur, petroleum and general cargoes. Write us today.



Exporter and importer alike are offered efficient, economical routing through the Port of Galveston to and from every world port. And connecting with the shipping lines at Galveston are railway systems that give fast freight service to and from every inland point.

Add to this the world-famous operating efficiency of the Port of Galveston, and you will see why Galveston is the logical port for the Southwest and Midwest shipper.

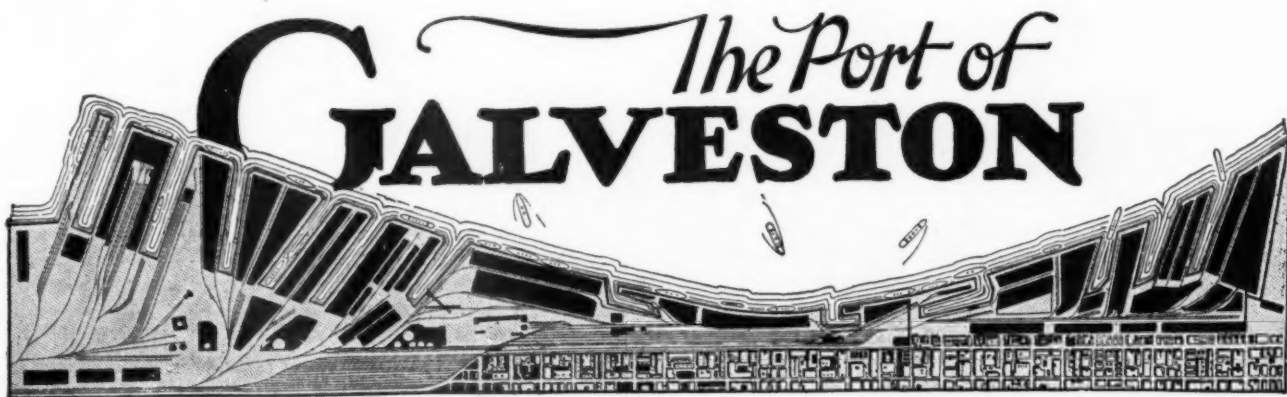
**Galveston Wharf Co.**

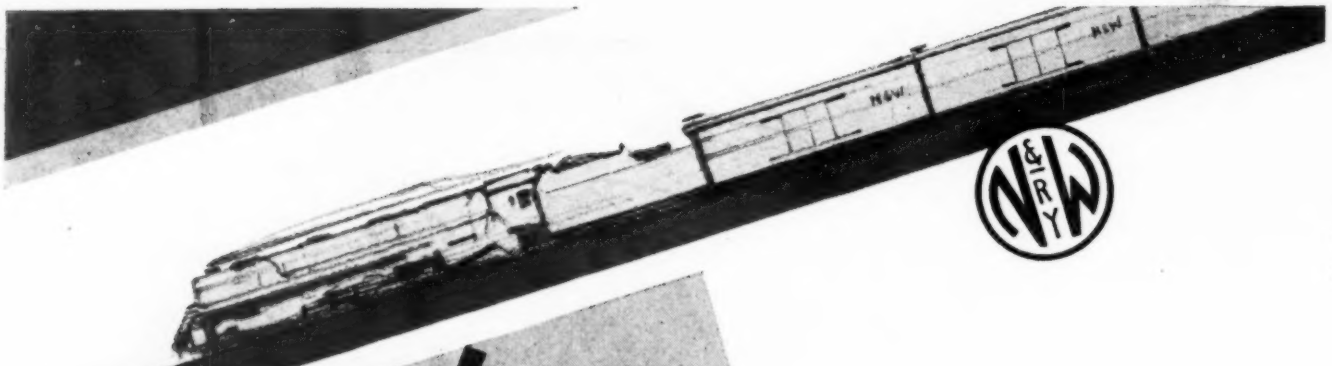
*Established 1854*

Galveston, Texas, U. S. A.

Geo. Sealy, Pres.

F. W. Parker, Gen. Mgr.





# THEY STEP LIVELY NOW

Today, less-than-carload shipments in through package cars step lively . . . make the same time as carload shipments when destined to points where package cars break bulk. As a result, traffic managers make promises more willingly . . . and the buying public shares the benefits in no small manner.

From St. Louis, Chicago and the Midwest, the Norfolk and Western Railway operates eastbound through package cars to the following important points:

CHICAGO to Roanoke, Lynchburg, Petersburg, Richmond and Norfolk, Va., Rocky Mount, Raleigh and Winston-Salem, N. C., and Bluefield, W. Va.

ST. LOUIS to Lynchburg, Va., and Portsmouth, Va.

EAST ST. LOUIS to Roanoke, Va., and Norfolk, Va.

INDIANAPOLIS to Portsmouth, O., and Roanoke, Va.

DETROIT to Roanoke, Va., and Portsmouth, O.

CLEVELAND to Roanoke, Va., and Portsmouth, O.

TOLEDO to Roanoke, Va., and Portsmouth, O.

LOUISVILLE to Lynchburg, Roanoke and Norfolk, Va., Mount, N. C.

CINCINNATI to Lynchburg, Roanoke and Norfolk, Va., Winston-Salem, N. C.

COLUMBUS to Bristol, Va.-Tenn., Roanoke, Lynchburg, Petersburg, and Norfolk, Va., Spencer Transfer and Winston-Salem, N. C.

PORTSMOUTH to Bristol, Va.-Tenn., Roanoke, Lynchburg, Petersburg and Norfolk, Va., Winston-Salem, N. C.

Information on other points to which through package cars are operated is available from Norfolk and Western Freight Traffic Department representatives in key cities throughout the nation.



# NORFOLK and WESTERN RAILWAY



# INDUSTRIAL SUCCESS

**—is largely a matter of  
RAW MATERIALS, MARKETS,  
TRANSPORTATION, LABOR SUPPLY**



The Industrial Development Department of the Missouri Pacific Lines, with its staff of Industrial Engineers and a Mineral Technologist, is prepared to enable you to visualize how your plant can profit from the natural advantages to be found only in its rapidly growing territory.

**V**ARIOUS kinds of industries are thriving in Missouri Pacific Lines territory — the Great Central West and Southwest — where the existence of a satisfactory inter-relation of many economic factors offers the greatest assurance of success.

Raw materials in great variety and abundance are to be had in this territory. These natural resources, both mineral and vegetable, are of particular interest to the chemical industry.

Markets, account the continuous development of this territory, are ever increasing, and the relative proximity of the markets of Latin America, so readily served through the Gulf Ports, offers untold opportunities for a further expansion of markets.

Missouri Pacific Lines rails serve all the major industrial centers in this territory, and with its rails reaching all the leading Gulf Ports between New Orleans and the Rio Grande, gives assurance of maximum transportation service to domestic and foreign markets.

Labor conditions are ideal, with native white intelligent workers predominating.

Other economic factors, such as power, fuel, civic cooperation, equable climate, tax exemptions, etc., are added attractions.

**J. G. CARLISLE**  
*Director Industrial Development*  
**MISSOURI PACIFIC LINES**  
**St. Louis, Mo.**



**"A Service Institution"**

## To the MANUFACTURER and DISTRIBUTOR

Abundant supplies of coal, coke, iron, timber and other raw materials lie in the regions of Georgia and Alabama, which are traversed by the

## Central of Georgia Railway

Cheap electric power, numerous undeveloped water-powers, good home markets and excellent shipping facilities. Therefore, manufacturing conditions are ideal.

Many of the cities on the Central of Georgia Railway occupy advantageous positions for distributing warehouses, and a number of the larger northern and eastern manufacturers supply their southeastern trade from branch houses in these cities.

Full and detailed information upon application.

**J. M. MALLORY, General Industrial Agent**  
413 West Liberty St.  
SAVANNAH, GEORGIA

## The EAST COAST of FLORIDA is an integral part of the INDUSTRIAL SOUTH

Industries that utilize vegetable and fruit products and industries that utilize timber and its products should investigate the possibilities of the East Coast section of Florida.

*It will be our pleasure to assist you.*

Write

**J. W. Hoffman, Vice Pres.**  
Model Land Co., Flagler System  
St. Augustine, Florida

*The late Henry M. Flagler and his organizations have served Florida since 1886*

## COMPLETE FOUNDRY SERVICE

The MOCCASIN BUSHING COMPANY, manufacturers of MOCCASIN OIL DISTRIBUTING BUSHINGS, is prepared to supply engine brasses, brass or bronze castings of all descriptions and MOCCASIN solid or cored bronze bars at reasonable prices.

Send your specifications to the MOCCASIN BUSHING COMPANY, 2000 Chestnut Street, Chattanooga, Tennessee. Your order will receive our prompt attention.



### WE LOOK INTO THE EARTH

By use of Diamond Core Drills

We test foundations for buildings, bridges and dams. We prospect coal and mineral lands in any part of North and South America.

**PENNSYLVANIA DRILLING CO.**  
1812 West Carson St., Pittsburgh, Pa.  
Drilling Contractors

WE are the sole and only manufacturers of the machine known under the trade name and trade mark

### "CEMENT GUN"

Let us aid you by giving you full information how your new construction or repair is made with this machine and its product  
**GUNITE**

*Experience Has Taught Us All Best Methods*

**CEMENT GUN CO., INC., Allentown, Penna.**

## In St. Louis Hotel Mayfair....

8th and St. Charles

In the center of theatre and shopping districts. Floor lamps, fans, circulating ice water in every room. The quiet, refined atmosphere of an exclusive club—an hotel of distinction. Dining room. Coffee shop. Garage service.

400 ROOMS — \$3<sup>00</sup> to \$6<sup>00</sup>  
BATHS

## Hotel Lennox....

9th and Washington

St. Louis' newest and smartest hotel opened September 3rd. In the heart of business district. Dining room. Coffee shop. Garage service.

400 Rooms with tub bath and shower — \$3<sup>00</sup> to \$6<sup>00</sup>

## Hotel Kings-Way...

West Pine at Kingshighway

Opposite beautiful Forest Park. Near bus, street car and motor highways. 20 minutes from downtown. Club breakfasts, table d'hôte dinners. Rooms for two from \$4. Special rates for permanent guests.

## Heiss Hotel System KMOX



# Alabama

is served by fifteen lines of standard railway, and twenty-two secondary lines. Each of the 67 counties in the state is afforded some form of railroad transportation, the majority by main line connections. The total passengers carried in 1928 were 5,689,151. The total freight hauled was 59,390,417 tons of revenue freight and 6,659,616 tons of non-revenue freight.

This is an extract from a comprehensive survey of Alabama made by the Alabama Industrial Development Board. Copies of this survey will be furnished responsible individuals upon request. Address: Alabama Industrial Development Board, Brown-Marx Building, Birmingham, Ala.

*This advertisement published through the courtesy of the Alabama Power Company, whose New Industries Division is actively cooperating with the Alabama Industrial Development Board in bringing new industries to Alabama.*

# Honorable mention

## to Baltimore men for distinguished

# Airport

# Design



Honorable Mention design submitted by James S. Nussear, Jr., architect, and William N. S. Pugh, associate, Baltimore, Maryland.

This imaginative but practical design for an airport was created by James S. Nussear, Jr., architect, and William N. S. Pugh, associate, both of Baltimore. Its importance may be judged from the fact that it was awarded Honorable Mention in the Lehigh Airports Competition.

The Competition, which was conducted with the hope that it would stimulate interest in the study of proper airport development, brought forth a brilliant collection of ideas and guiding principles. These will be particularly important to the South where expansion is taking place at such a rapid rate.

In one respect, this design is typical of all of the 257 entries. It shows the general acceptance that concrete is gaining as the most practical surfacing material for runways.

The Competition results are epitomized in our brochure, "Highlights of the Lehigh Airports Competition." We shall be glad to send you a copy.

**Lehigh Portland Cement Company**  
 Allentown, Pa.      Birmingham, Ala.      Chicago, Ill.  
 Baltimore, Md.      Richmond, Va.



MILLS FROM COAST TO COAST

### THE JURY'S DECISION

FIRST PRIZE: A. C. Zimmerman and Wm. H. Harrison, Los Angeles, Cal. (jointly) . . . \$5,000  
 SECOND PRIZE: C. Gifford Rich, Chicago, Ill. . . \$2,500  
 THIRD PRIZE: Odd Nansen, East Orange, N. J., and Latham C. Squire, New York City (jointly) . . . \$1,000  
 FOURTH PRIZE: Will Rice Amon, New York City . . . \$500

#### Honorable Mention—\$100 each

W. Frank Bower, Jr., Henry L. Sandlass, Alfred A. Rothmann, jointly, of East Orange, N. J.  
 H. Roy Kelley, Los Angeles, Cal.  
 James S. Nussear, Jr., architect, and William N. S. Pugh, associate, Baltimore, Md.  
 Edward C. Remson, New York City.  
 George A. Robbins, Philadelphia, Pa.  
 Robert Paul Schweikher, Denver, Col.  
 Fred E. Sloan and Elmer A. Johnston, Chicago, Ill.  
 Lloyd N. F. Spicer, Bayside, Long Island, N. Y.  
 Edwin M. Stitt, Pittsburgh, Pa.  
 Charles A. Stone, U. Floyd Ribble, jointly, Los Angeles, Cal.  
 Robert D. Scott, Howard Hutchinson, Lansing C. Holden, Jr., jointly, New York City.  
 Virgil Westbrook, San Clemente, Cal.

### JURY OF AWARDS

Raymond M. Hood, A. I. A., A. D. P. L. G., Chairman.  
 Prof. Wm. A. Boring, F. A. I. A., Dean of the School of Architecture, Columbia University.  
 Parker Morse Hooper, A. I. A., Editor, The Architectural Forum.  
 Francis Keally, A. I. A.  
 Colonel Willard Chevalier, C. E., Publishing Director, Engineering News-Record.  
 George B. Ford, A. I. A., Technical Advisory Corporation, Planning Consultants; Airfield Planner to the War Department.  
 E. P. Goodrich, Consulting Engineer, City Planning Consultant.  
 Dr. George W. Lewis, Director of Research, National Advisory Committee for Aeronautics.  
 Major John Berry, Manager, Cleveland Municipal Airport.  
 Charles S. Jones, President Curtiss Flying Service.



# *The Fabricated* **STRUCTURAL STEEL**

## IN THE CONSTRUCTION

of the group of Buildings, Viaducts,  
and other structures in the vast

### CLEVELAND TERMINAL

project was manufactured at the  
Ambridge Plant of

### **AMERICAN BRIDGE COMPANY**

*Subsidiary of United States Steel Corporation*

MANUFACTURERS OF STEEL STRUCTURES  
OF ALL CLASSES

General Offices—71 Broadway, New York, N. Y.

*Contracting Offices at:*

New York, Philadelphia, Boston, Baltimore, Pittsburgh,  
Cleveland, Cincinnati, Detroit, Chicago, St. Louis, Duluth,  
Minneapolis, Salt Lake City, Denver.

*Pacific Coast Distributor:*

### **Columbia Steel Company**

San Francisco, Calif. Los Angeles, Calif. Portland, Ore.  
Seattle, Wash. Honolulu, T. H.



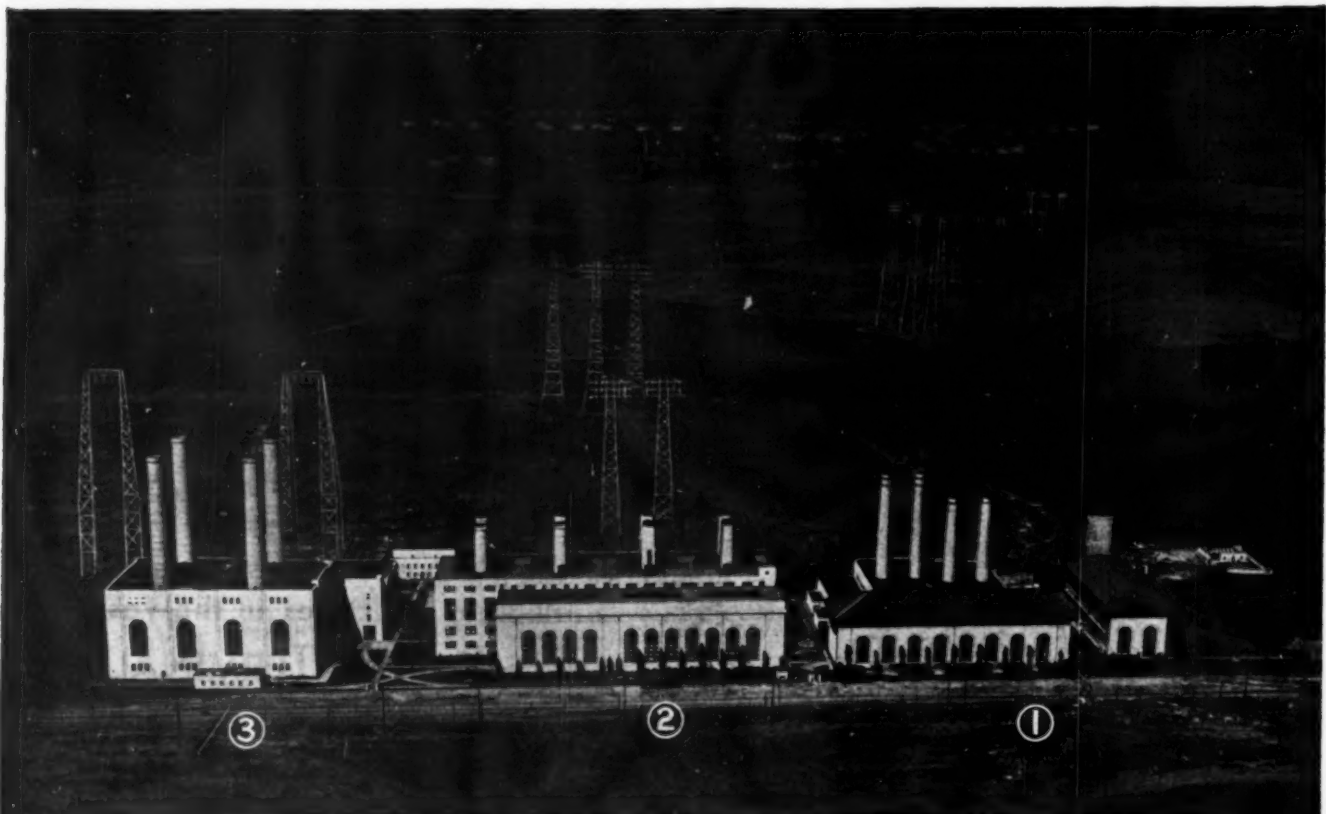
Graham, Anderson, Probst & White, Architects for Terminal Buildings  
H. D. Jonett, Chief Engineer, The Cleveland Union Terminal Co.



---

BUILDERS AND ENGINEERS For The BUSINESS LEADERS OF AMERICA

---



Long Beach Steam Plants of the Southern California Edison Company, Ltd. Plants Nos. 2 and 3 were designed and built by Stone & Webster Engineering Corporation under the supervision of the client's Department of Engineering Design.

## GENERATION TRANSMISSION and DISTRIBUTION of POWER

To meet every need of  
Utilities and Industrials

**STONE & WEBSTER ENGINEERING CORPORATION**

A SUBSIDIARY of STONE & WEBSTER, INCORPORATED

---

# TABLE OF CONTENTS

Baltimore, Md., July 17, 1930

## EDITORIALS

The South's Answer to Business Pessimists.....	Cover Page
Flexible Tariff Provision Proves Its Value.....	45
Sidewalks As An Investment.....	46
Rest From Legislation Helps Business.....	46
South's Maritime Leadership Strengthened.....	47
Indifference a Communist Stimulant.....	47
Advertising Federation Invited to Hold 1931 Convention in Miami.....	48
A Public Debt a Sacred Obligation.....	48
Remarkable Treasury Estimates.....	48

## NEWS and FEATURE ARTICLES

South Setting Pace for Nation in Construction Work.....	49
Industrial Metamorphosis of West Virginia's Great Kanawha Valley	
By Lewis C. Allen	52
Oklahoma Mineral Resources As a State Asset.....	By J. G. Puterbaugh 54
South Carolina Cement Contracts, Bids Asked on \$5,250,000 of Roads.....	56
Progress on \$15,000,000 Sewerage, Water and Drainage System in New Orleans....	57
Half a Century of Enterprise.....	59
Hard Times? .....	60
\$46,000,000 Development in Texas.....	60
\$10,000,000 Baltimore Steamship Line.....	61
1100-Mile Pipe Line Projected in Oklahoma.....	61
Urge \$52,000,000 Channel for Trinity River.....	61
\$5,000,000 Warehouse to Be Erected in St. Louis.....	62
\$8,240,000 Authorized for Supreme Court Building.....	64
Shreveport's \$8,000,000 Air Project.....	65

## SPECIAL DEPARTMENTS

*Construction, New Industries and Contracts, 18 Pages Beginning on Page 67*

Iron, Steel and Metal Market.....	63	Financial News .....	84
Aviation, Airports and Airways.....	65	Industrial News of Interest.....	86
New and Improved Equipment.....	66	Trade Literature .....	86

*Classified Reference for Buyers.....* 106

*Alphabetical Index to Advertisers.....* 122

## MANUFACTURERS RECORD

RICHARD H. EDMONDS, Editor

Published Every Thursday  
by the

MANUFACTURERS RECORD  
PUBLISHING CO.

### MAIN OFFICE

Manufacturers Record Building,  
Commerce and Water Streets,  
Baltimore, Md.

### BRANCH OFFICES

Chicago—11 S. LaSalle St.  
New York—901 Singer Bldg.

Subscription Rates: \$6.50 a year (in advance); six months, \$3.50; three months, \$2.00 to United States, Mexico, Cuba, Porto Rico, Hawaii and the Philippines. For Canada add postage \$1.00 a year. For other foreign countries add postage \$3.50 a year.

PUBLISHERS DAILY CONSTRUCTION BULLETIN AND BLUE BOOK OF SOUTHERN PROGRESS  
Member A.B.C.

# Actinic Glass for Textile Mills

Manufactured by  
PENNSYLVANIA  
WIRE GLASS CO.

Will lower pro-  
duction cost by  
relieving eye-strain

Distributed by  
**HIRES TURNER  
GLASS COMPANY**  
PHILADELPHIA, PENNA.  
Rochester Washington Albany  
Baltimore

or through any glass jobber

No. 1

You Can Depend On

**"HERCULES"**  
WIRE ROPE

because every wire that goes  
into it is first rigidly tested by  
us to make sure that it has every  
quality that hard work requires.

Made Only By

**A. Leschen & Sons Rope Co.**

5909 Kennerly Ave.

ST. LOUIS

New York  
Denver

Chicago  
San Francisco

Established  
1857



Made of  
Acid-Steel  
Wire

## LEADITE

Trade Mark Registered U.S. Pat. Office

For Jointing Cast-Iron Water Mains  
Saves at Least 75%

Leadite Tested and Used for Over 30 Years

Leadite Joints Improve with Age

The Leadite Co., Land Title Bldg., Philadelphia, Pa.

"See our Full Page Ad in 2nd issue each month"

### No Caulking

## TILE Roofing and Floor

for Residences, Business  
and Industry

Some new, lower cost types in pleasing  
natural colors. The most economical roof.

Request literature. Send plans for cost.

**B. MIFFLIN HOOD COMPANY**  
Department M. DAISY, TENN.

## WATER

Purified  
Softened  
Filtered

For every industrial and domestic use

Filters—Pressure and Gravity  
Softeners—All types

127 years old

Founded 1802

**WM. B. SCAIFE & SONS CO.**

Executive Offices, OAKMONT, PA.

PITTSBURGH

NEW YORK

CHICAGO



# Manufacturers Record

Reg. U. S. Pat. Office

Devoted to the Upbuilding of the Nation Through the Development  
of the South and Southwest as the Nation's Greatest Material Asset

Vol. XCVIII No. 3  
Weekly

BALTIMORE, JULY 17, 1930

Single Copies, 20 Cents.  
\$6.50 a Year.

## Flexible Tariff Provision Proves Its Value

**E**VEN before the organization of the United States Tariff Commission as newly constituted under the Tariff law, at least one phase of the value of this legislation has been demonstrated: Investigations have been ordered on 50 articles, with a view to possible readjustment of present duties, yet no industrial or business flurry has been created, as invariably is the case when tariff legislation comes before Congress for consideration.

The transfer of tariff legislation from the Congress to the Tariff Commission may not entirely "take the tariff out of politics"; but certainly it minimizes the evil of politics in the tariff and installs a muffler on the loud speaker of tariff discussion in Congress or its committees.

In an ultimate analysis, this beneficent result may be attributed largely to a provision that "nothing in the law shall be construed to authorize a transfer of an article from the dutiable list to the free list, or from the free list to the dutiable list, nor a change in form of duty." The Commission, through approval by the President, may raise or lower duty rates within a limit of 50 per cent, but it may not alter the principle under which an article has been placed on the protected list or the free list.

Also, the holding of investigations or hearings in the comparative privacy or seclusion of the Commission's quarters, instead of the stadia of the House and Senate, will be conducive to a businesslike search for and consideration of facts, without the turmoil of partisan vaporings and demagogic ballyhoo. The lobbyist may mourn the passing of his profession and lobby committees may lose first-page prominence, but legislation and business will profit proportionately.

The procedure for bringing a tariff rate before the Commission is simple, and may be instituted without the agency of Congress. The law provides:

"In order to put into force and effect the policy of Congress by this Act intended, the Commission (1) upon request of the President, or (2) upon resolution of either or both Houses of Congress, or (3) upon its own motion, or (4) when in the judgment of the Commission there is good and sufficient reason therefor, upon application of any interested party, shall investigate the difference in the costs of production of any domestic article and of any like or similar foreign article.

"In the course of the investigation, the Commission shall hold hearings and give reasonable public notice thereof, and

shall afford reasonable opportunity for parties interested to be present, to produce evidence and to be heard at such hearings."

From this it appears that the ultimate consumer has as much right to ask for an investigation of any tariff item as any producer, or distributor or importer may enjoy. And even in hearings instituted by any industry or a business concern, the ultimate consumer may present his case.

In "ascertainment of differences in costs of production," the Commission is instructed by the law to adopt the following courses:

For domestic goods, besides production costs, to consider transportation costs and other costs incident to delivery to the principal United States markets, and "other relevant factors that constitute an advantage or disadvantage in competition."

For foreign goods, production costs and transportation charges to United States markets are to be ascertained, and the "other relevant factors" are to include "advantages granted to foreign producers by a government, person, partnership, corporation or association in a foreign country."

The cost of production for both domestic and foreign goods is to include: Costs of materials and labor and other direct charges; usual general expenses, including depreciation or depletion, rental, and capital charges; the cost of containers and coverings and other expenses incident to placing the article in condition packed ready for delivery.

Finally, the President by proclamation "shall approve the rates of duty and changes in classification, if in his judgment such rates and changes are necessary to equalize such differences in costs of production."

Such is the "flexible tariff" provision in theory. The good, bad or indifferent effects in practice may be determined by the spirit and procedure through which the Commission may administer the law and, in no small measure, by sincerity in cooperation by American industry and business and the people in general.

Conspicuous among the tariff provisions which the Commission has been asked to investigate is the duty on cement. Hardly has cement been transferred from the free list to the protected list at 6 cents per 100

pounds than this great industry finds itself again involved in a tariff tangle.

Especially in this age of highway, building and waterpower site construction, the importance of the cement industry in this country can hardly be exaggerated. The production of Portland cement in the United States in 1929 was 170,198,000 barrels, of which about 22,000,000 barrels was manufactured in the South. Stabilization for the industry cannot be assured until it is positively informed whether the duty is to be 6 cents or 3 cents or 9 cents, or a figure in between.

Also slated for investigation are boots and shoes, of leather, for which a duty of 20 per cent ad valorem, in general, is provided, with 35 per cent for such articles with uppers of other materials. The South in 1927 produced \$171,560,175 of such goods, and the United States produced \$944,714,463.

Among the other articles on the list, so far, are straw hats, certain varieties of soft wood lumber, wool felt hats, wool floor coverings and window glass.

The first and positively imperative requisite for the sound settlement of these and other rates is "to take the tariff out of politics." Never was the opportunity more promising than at present. The nominees must be, like Caesar's wife, "above suspicion." Of the six commissioners, "not more than three shall be members of the same political party," and the President shall select men "possessed of qualifications requisite for developing expert knowledge of tariff problems and efficiency in administering the provisions" of the flexible tariff section.

Finally, the Supreme Court has approved the constitutional right of Congress to delegate its tariff-making power and responsibility to the President, and in the last analysis, under the present law, the President continues vested with the ultimate power to change rates or to maintain them unchanged.

The success of this sound, businesslike effort to take the tariff out of politics will now rest largely in the White House, in the present and in the future.

### Sidewalks As An Investment

**D**ISCLOSURE that approximately 50 per cent of the fatalities on highways are due to pedestrians being struck while walking on paved roads at night lends weight to a suggestion that sidewalks be provided in suburban and rural sections, as really part of the good roads movement.

While the humanitarian phase of the suggestion alone entitles it to every consideration, the economic view also may be studied. The construction of cement or other hard sidewalks at the same time roads are laid down or "shoulders" are added, would add a tremendous aggregate to the general roads construction program, yet at small cost to each community individually. Even where roads already are laid or shouldered, such sidewalk construction would not be expensive, and in the prevention of fatalities or other casualties would prove a remunerative investment.

### Rest From Legislation Helps Business

**O**F the factors which almost daily develop to encourage business in its progress back to a condition of normal American prosperity, the adjournment of the special session of the Congress has proved to be among the most weighty. Not that this fact is a reflection on the Congress, but rather a natural consequence of the abatement of political activity, and of the settlement of the uncertainty which surrounded tariff legislation in the formative phase.

To criticize or commend a Congress is to criticize or commend the people who elected it. Theirs is the responsibility for the record. Also theirs is the opportunity, in the election, to express approval or disapproval and to make changes which they may consider advisable.

While many such changes are expected next November, the present Congress has been pretty representative of the American people as a whole. Its intentions have been good and in many ways it has produced good legislation. It has provided for constructive work, and at the same time it has ladled out millions of dollars with almost reckless American liberality. The members individually and in groups have squabbled among themselves over policies, and methods for putting them into effect—just like the American people as a whole. The practical politics which afflicts the people sorely has been conspicuous in the Congress. Good traits in the people have been reflected in the Senate and the House, and the selfishness and self-seeking inherent in human nature have been evident in proportionate measure.

The desire of the people to relieve the farmer has been translated into deed—somewhat in experimental fashion, perhaps, but none the less in good intent. Other branches of industry have been encouraged by a new Tariff law—no more perfect in its way than any which it succeeds, but honest according to the view of the political party which the people themselves placed in power. The appropriation and authorization of hundreds of millions for new buildings, for roads and waterways and kindred projects is characteristic of the constructive spirit which always has animated the American people.

Somewhat roughly speaking, the expenditures of this Congress will run to nearly \$5,000,000,000, of which, inevitably, an appreciable percentage is unnecessary and a somewhat smaller percentage represents actual waste. But, logically, the people cannot grumble when called on to foot the bills which they have incurred through their elected representatives.

The average member of either branch of Congress usually votes on any measure with his political eye cocked on his district or State, rather than in the exercise of his own judgment and even knowledge. The adage of the late "Private" John Allen still holds good: "It is easier to vote wrong than it is to vote right and explain it."

Good or bad, as one may view its conduct and its work, the passing Congress is generally typical of the people who elected it.



## South's Maritime Leadership Strengthened

THE leadership of the South in the ocean transportation business of the country becomes more firmly established in the organization of the Baltimore Mail Steamship Company, which, with a capital of \$10,000,000, will operate a regular freight, mail and passenger service between that port and Hamburg. Conspicuous in the enterprise are the Baltimore & Ohio and the Pennsylvania Railroads, which have become quasi partners with the steamship company and will work to the common interest of the port, of the South and of the inland country.

For Baltimore, the most immediate result of this enterprise will be the reconstruction of the Canton piers at a cost of \$5,000,000, while also facilities are at hand for maintaining the ships in the finest physical condition. The amount of money which will be disbursed in the port may be estimated from a statement that the United States Lines, a company of the same nature, spends from \$16,000,000 to \$18,000,000 a year in this country.

For the South in general, this new service will mean the diversion of an immense freight tonnage from New York and Philadelphia to a Southern port, and a conspicuous demonstration that the rail and maritime facilities of Southern ports are not second to any other section, when all conditions are analyzed and brought to a common denominator.

For inland shippers to trans-Atlantic ports, the development provides the advantages of rail differentials, low port charges, the most modern tidewater terminals, with direct car-to-ship transfer and elimination of lighterage, and a great expanse of protected harbor and fine facilities for berthing and anchorage.

In compilation of the total tonnage of foreign trade of the United States by States and geographic divisions, figures of the Shipping Board for the fiscal year ended June 30, 1929, showed the South to rank first in the volume of exports and second in imports. More than 20,000,000 tons of exports passed through Southern ports, as compared with 16,725,000 tons for the Middle Atlantic States, in which New York is included. Imports of foreign goods through Southern ports ran to 13,731,000 tons, with Louisiana second only to New York.

Exports through Southern ports in the fiscal year mentioned, the latest for which returns are available, were more than 33 per cent of the United States total, while imports through ports in the South were more than 27 per cent of the national aggregate.

Of the 10 leading ports of the country in volume of foreign trade handled in 1929, four were in the South, New Orleans standing second, Baltimore fourth, Houston eighth and Norfolk tenth. In value of exports, the South handled \$1,585,000,000 out of \$5,241,000,000 for the country, and in imports \$496,900,000 out of \$4,400,126,019.

The operation of this new company will add to the South's foreign service weekly sailings by five turbine electric cargo vessels of 11,773 deadweight tons each, and under its mail contract the company is to

build two 18-knot ships within five years. Cargoes for the vessels will be brought from all parts of the country on terminal trackage by the Baltimore & Ohio, the Pennsylvania, the Western Maryland, the Chesapeake & Ohio and the Norfolk & Western railroads.

In the friendly rivalry between the ports of the South, Baltimore now presents a further incentive and inspiration for development and expansion, and prompt response may be expected from Norfolk and Newport News, from Charleston and Savannah, from Mobile, New Orleans and Houston and Dallas.

No ports in all the world are more favorably located, particularly for the avoidance of lighterage and the accompanying delays and expenses, than the ports of the South. None has finer mechanical equipment for the handling of outgoing and incoming cargoes. Not even New York and Philadelphia can offer better present and potential railroad service. Ample financial resources are at hand, as demonstrated in the financing of the new line by the Baltimore Trust Company under the presidency of Donald Symington, who will head the steamship enterprise.

These facts are recognized by such men as George M. Shriver, senior vice-president of the Baltimore & Ohio; A. J. County, vice-president of the Pennsylvania; Henry H. Lee, president of the Pennroad Corporation; John M. Franklin, son of P. A. S. Franklin, president of the International Mercantile Marine; Kermit Roosevelt, a leading figure in American maritime circles, and others who also are associated in the organization and operation of the new Southern company.

The institution of this new service through the South is impelled by the unrivaled advantages presented by Southern ports, and also it will direct the attention of others to these advantages.

---

### Indifference a Communist Stimulant

IN comment on a statement in the Nashville Banner that "communism is challenging Tennessee, and Tennessee must accept the issue or surrender its sovereignty," the Birmingham News says: "It is studied indifference—not policemen's billets—that breaks the back of communism in free States like Alabama and Tennessee."

At the same time, disclosure is made that "the necessary funds are becoming available to allow the communist party to present a 'Southern Communist Weekly.'"

Among the most potent stimulants of communism are the mistaken "indifference," the sentimental "tolerance" and the boasted "liberality" of many American newspapers, and many good citizens. Only by meeting the issue firmly may the South avoid possible enforced resort to "policemen's billets." To remain passive is to become submerged. Look at China and India.



### Advertising Federation Invited to Hold 1931 Convention in Miami

THE Advertising Federation of America should hold its next annual meeting in the South. Miami, Fla., has extended an invitation to the Federation to meet in that city. Geo. R. Hilty, Chairman of the 1931 Convention Committee of the Miami Advertising Club, believes that the next convention—which will be held in 1931—should be of national and international significance and importance, and that to meet in Miami would be a tremendous factor in cementing a closer relation through a better understanding between American and Pan American businessmen.

The director general of the Pan American Union, Washington, D. C., has indicated his willingness to co-operate in making the Miami convention a success, and, while the entire State of Florida is being organized, Atlanta and Cuba have also indicated their willingness to join.

Gilbert T. Hodges, member of the executive board of the New York Sun and the Munsey Magazine, who is now president of the Advertising Federation of America, stated that since coming to Florida, he appreciated the meaning of the words "Pan American." "Industries of the United States," points out Mr. Hilty, in his invitation extended through W. A. Strong, chairman of the Board of the Federation, "do a \$2,000,000,000 annual import and export business with the Pan American Republics. They advertise extensively in the publications of these countries, and are competing against an aggressive and vigorous campaign for trade by European countries. If the United States, with the Advertising Federation, will be able to bring about the notable achievement of mutual understanding among the countries of the Western Hemisphere, the Federation may again play an important part in the same manner among European countries, and those of the Eastern Hemisphere."

Of even greater importance than the opportunity for discussing and studying trade problems with South American representatives, the MANUFACTURERS RECORD believes that the meeting at Miami of the Advertising Federation of America would be of immense educational value to those attending, through their contact with the South. To reach Miami the visitors of this country would have to travel the whole length of the South. They will get a first-hand glimpse of the industrial development of the cities and states through which they pass. They would be made to realize as never before the meaning of the more than \$10,300,000,000 of manufactured products annually turned out by Southern factories. They will be made to realize the immense markets throughout the South for goods, material, machinery and equipment of practically every description. They would have clearly before them the fact that the South, covering about a third of the area and having about one-third of the population of the United States, offers a vast home market for American products.

### A Public Debt a Sacred Obligation

THE MANUFACTURERS RECORD takes pleasure in reprinting a dispatch which appeared in a Jacksonville paper from Daytona Beach, Florida. It is headed "City Will Meet Obligations" and reads:

"The city of Daytona Beach is going to remain solvent and pay its debts as they come due, even though that means additional cuts in the city payroll, Mayor B. B. Baggett declared in a statement today.

"Daytona Beach has bonds maturing in November," Mayor Baggett said, "and those bonds are going to be paid, no matter how much we may have to scrimp in other ways. Some people call that way of doing business political suicide. If so, then I am in favor of political suicide."

Some weeks ago there appeared in these columns an editorial under the title "A Public Bond Is a Public Trust." It met with widespread approbation. The statements made in that title and in that editorial should be emphasized and re-emphasized until the talk that is going on in some communities, and even the thought of repudiation of a sacred obligation should be stopped.

We are fully appreciative of the stress of the times. The high burden of taxation and the decline in values, which have made it difficult for some of the smaller communities to meet their obligations also make it conceivable that it may be necessary for some of them to ask for a temporary delay or extension of time, but to consider seriously the thought of repudiating a just and sacred obligation—an obligation which rests upon the community and its every citizen, should be abandoned forthwith. Selfishness should dictate this as being the correct position to take if nothing else does. What can be the credit hope of the future of a town that repudiates its debt?

### Remarkable Treasury Estimates

MORE or less captious complaints of inefficiency in the great government departments, in general, lose something of their forces in consideration of the Treasury report at the close of the fiscal year, June 30. Even in items aggregating billions of dollars, the department's estimates at the start of that fiscal year appear as amazingly accurate in comparison with the actual results.

Customs and internal revenue receipts amounting to \$3,626,000,000 were only three-tenths of 1 per cent lower than the Treasury's estimate after allowance for tax reduction. In its estimate for total income tax receipts, which aggregated \$2,411,000,000, the Treasury was only four-tenths of 1 per cent out of the way, the receipts having exceeded its estimate to that extent. Miscellaneous internal revenue receipts of \$628,000,000 were 1 per cent below expectations.

Especially notable was the Treasury's estimate of \$4,023,000,000 for budget expenditures, which was approximately seven-tenths of 1 per cent higher than the actual expenditures of \$3,994,000,000.

The Treasury has not yet attained the 100 per cent accuracy which the exact science of mathematics demands, but in more than one estimate it has come within a remarkably small fraction of that perfection.

## South Setting Pace for Nation in Construction Work

**More Than Half a Billion Dollars of Building and Construction Contracts Awarded in the Southern States During the First Six Months of 1930, a Gain Over Each of the Corresponding Periods of 1929 and 1928**

**C**ONTRACTS awarded during the first six months of 1930 in the 16 Southern States covering construction, building and industrial projects had a total value of \$537,677,000, according to a compilation of reports published in the DAILY CONSTRUCTION BULLETIN and in the construction columns of the MANUFACTURERS RECORD. During the first half of the preceding year, contracts awarded for similar projects in the South amounted to \$455,296,000, and during the first half of 1928 such awards had an aggregate value of \$416,624,000.

Preliminary announcements covering contemplated construction projects, January to June, inclusive, called for an expenditure of more than \$637,000,000. While many of the projects included in this total and announced early in the year have since been let to contract, a large number of important new enterprises are still in the plan stage and will not be contracted for until late this year. Apparently, the South, as in 1921, is setting the pace for the rest of the country in getting out of the slough of despond and depression onto the high road of progress and prosperity. Its business leaders and financial interests from other sections have again demonstrated their faith in the boundless possibilities of the section and attest their belief in the soundness of the nation's business structure by undertaking new building enterprises and costly improvement programs, launching new industrial ventures and going forward with municipal and private construction work on a big scale.

### *Epochal Development in Natural Gas Industry Stimulates Industrial Activity*

**THE OUTSTANDING FEATURE** of the year's construction activity has been the building of great mileages of natural gas pipelines from producing areas in the Southwest and central South to industrial centers in many parts of the country, even including the far West and large cities on the Atlantic seaboard. This movement, which figured so prominently in the 1929 construction program, was made possible by the perfection of methods for production of steel pipe and welding it to withstand very high pressures. Also, many engineering problems in connection with the installation of such lines were solved, so that, while a few years ago a line 250 miles long was heralded as a great achievement, one system now in course of construction will consist of 2500 miles of pipelines and serve scores of towns and cities and many important individual industries.

The effect of this construction program is widespread, for it stimulates the production of steel when demands in other lines fall off sharply; it is creating a market for materials and supplies turned out by manufacturers in all parts of the country; it provides a market for power-driven tools such as cranes, excavators, trenchers, backfillers, motor

trucks, tractors, welding machines, etc., and gives employment to thousands of men at good wages.

A very recent development in this connection is the building of welded steel pipelines to transport gasoline, and thus reduce distributing costs. Several experimental lines proved successful, and contracts were recently let for an 800-mile line from Borger, Texas, to St. Louis, Mo., to cost over \$5,000,000. An idea of what such a project involves may be gained when it is considered that over 100,000,000 pounds of 8-inch pipe will be required, 10 large pumping stations with necessary motors and engines will be erected, bulk stations will be provided every 50 miles along the line, a telephone system will parallel it and dockage facilities will be provided at St. Louis to permit water transportation to many cities.

Likewise, attention has recently been centered on the building of lines to distribute crude oil from producing fields to refineries in remote areas. One \$15,000,000 line undertaken by the Ajax Pipe Line Company provides for transportation of oil from Tulsa, Okla., to Wood River, Ill. A \$100,000,000 natural gas pipeline from the Texas Panhandle to Chicago calls for 1,000 miles of 24-inch high pressure pipe, while an additional 1,000 miles of pipe ranging from 8 to 16 inches will be used for auxiliary

and lateral lines. A 70,000 horsepower compressor station, which will be increased to 100,000 horsepower, is a feature. A gas pipeline, 1250 miles long, is under construction from Texas fields to Indiana, at a cost of over \$40,000,000. Projected lines include one from Kentucky fields to Detroit, and another from West Virginia fields to Atlantic seaboard centers such as Philadelphia, Baltimore and Norfolk.

The plan of developing natural gas lines is following closely the interconnected super-power scheme initiated a number of years ago in the South. So, these new fuel lines are being interconnected and tied in with various producing areas to assure a continuous and dependable supply of gas. Meanwhile, plans are being discussed for supplementing this supply with the output of huge coal processing plants to be built at or near the mouth of mines. Special lines have been constructed to numerous of the South's giant steam-electric generating plants, gas taking the place of other fuels.

### *Power Projects Keep Pace With Expansion in Industry and Business*

**TOGETHER WITH THE GREAT EXPANSION** under way in the gas industry, hydro-electric and steam-electric projects figure prominently in the construction program of the South. The output of most of the new plants is reported as sold before the generators are turning over, so that the utility companies in reality are only keeping pace with the needs of the section. Power consumption is a good index of industrial and building activity and, judging from the programs mapped out over a period of years by the principal companies in the South and Southwest, industrial and business expansion will go forward in volume. For instance, the Dallas Power & Light Company recently announced plans for an \$8,500,000, 120,000-kilowatt steam-electric plant. The White River Power Company, headed by H. C. Couch of Pine Bluff, Ark., proposes developing hydro projects in Arkansas, aggregating 400,000 horsepower, and to involve an expenditure of \$47,000,000. The Union Electric Light & Power Company, St. Louis Mo., is building a hydro-



## COMPARATIVE RECORD OF CONSTRUCTION IN THE SOUTH

	Contracts Awarded				Contracts to be Awarded 1930
	1927	1928	1929	1930	
January .....	\$ 60,460,500	\$ 52,593,000	\$ 67,132,500	\$ 39,149,000	\$ 81,518,000
February .....	43,378,500	50,058,500	61,556,500	75,340,500	113,339,500
March .....	81,482,000	75,164,000	53,707,500	69,753,000	117,563,000
April .....	59,025,000	72,648,500	107,097,500	52,242,500	101,256,500
May .....	67,463,500	82,129,500	105,506,500	75,023,500	129,561,500
June .....	68,113,000	84,030,500	60,285,500	226,168,500	93,791,500
Total for six months.....	\$379,922,500	\$416,624,000	\$455,296,000	\$537,677,000	\$637,030,000
July .....	74,576,000	73,320,500	64,263,500		
August .....	71,243,500	86,538,000	89,675,000		
September .....	92,038,500	49,032,500	46,053,500		
October .....	46,257,500	47,913,500	53,711,000		
November .....	50,604,500	75,383,000	34,691,500		
December .....	60,243,000	57,862,500	36,300,000		
Yearly total.....	\$774,885,500	\$806,674,000	\$779,981,000		

electric project at Bagnell, Mo., estimated to involve the expenditure of \$40,000,000. The Appalachian Electric Power Co., Roanoke, Va., is enlarging its hydro plant on the James River at a cost of \$1,200,000. Chicago interests represented by Emery, Peck & Rockwood propose developing hydro projects on the Colorado River in Texas at a cost of \$15,000,000. The Electro-Metallurgical Development Co., New York, has under way a big industrial and power project in West Virginia to involve an estimated expenditure of \$20,000,000. The West Virginia Power & Transmission Co. recently received permits for a comprehensive development program on the Blackwater and Cheat Rivers in West Virginia. The Mountain Power Co., Chattanooga, proposes a 55,000-horsepower project on the Tellico River. The Texas Hydro Electric Co. has under way a number of important projects on the Guadalupe River in Texas. Practically all of the major power companies in the South are this year expending huge sums in enlarging established plants, building new hydro and steam projects and erecting new substations and transmission lines.

#### *Railroads Investing Millions in New Lines, Shops, Terminals and Rolling Stock*

THE RAILROADS OF THE SOUTH AND SOUTHWEST are literally pouring millions of dollars into rehabilitating their lines and shops, erecting new shops, terminal facilities, union stations, etc., and purchasing new rolling stock. Also, extensive mileages of new lines are under way and proposed. A 120-mile line is being built from Amarillo, Texas, to Boise City, Okla., for the Atchison, Topeka & Santa Fe Railway system. The Aransas Harbor Terminal Railway and allied interests propose a deepwater port at Port Aransas, Texas, to cost \$10,000,000. The Louisville & Nashville Railroad is building a 13-mile line from Chevrolet, Ky., to Hagans, Va., at a cost of

\$5,300,000. A subsidiary of the Virginian Railway Co. is building a seven-mile line along the Guyandot River, West Virginia. The Chesapeake & Ohio lines awarded contracts in June for a \$2,200,000 tunnel near Hinton, W. Va. The Norfolk & Western Railway Co. is erecting a \$500,000 office building at Roanoke. Contracts have been awarded by the Chesapeake & Ohio lines for a \$1,600,000 coal pier at Newport News, Va., and a \$1,500,000 merchandise pier will also be erected.

The St. Louis Southwestern Railway Co. was recently granted a permit for a 32-mile line between Caraway and Truman, Ark. The Corpus Christi, San Angelo & Roswell Railway Co. proposes a 725-mile line between Corpus Christi, Texas, and Roswell, N. M. The Atchison, Topeka & Santa Fe Railway Co. recently completed a 65-mile line from San Angelo to Sonora, Texas.

#### *New and Enlarged Industrial Plants Go Forward in Every Section*

MISCELLANEOUS INDUSTRIAL ENTERPRISES of a varied character are under way and proposed. In addition to new projects initiated by local and outside interests, established plants are being expanded. Even in the textile industry, which has been hard hit in recent years due to overproduction, many millions of dollars are being expended for new plants and for modernizing and re-equipping established mills. Diversification of output of Southern mills is advancing. A number of mills producing specialties have been established.

#### *Cement and Oil Industries Push Improvement Programs*

While most of the cement mills in the South have been operating on low production schedules, plans are being made for building new mills. One is proposed near Tulsa, Okla., by the Missouri Portland Cement Co., St. Louis, Mo., at a

cost of \$2,500,000. Another is projected at St. Louis by the St. Louis Portland Cement Co., organized by Denver, Col., and Oklahoma City interests. Millions of dollars are being expended in modernizing established petroleum refineries, the aim being largely to increase the production of high-test gasoline. One company alone is expending \$70,000,000 in its improvement program. Meanwhile, new refineries and distributing plants are being built or planned in Houston, Corpus Christi, Savannah, Memphis, Baltimore, New Orleans and other cities with water shipping facilities, in line with the policy to cut distribution costs of finished products.

#### *Du Ponts Continue Heavy Investments*

The Du Pont interests continued to go forward with important projects in the South and Southwest. At Belle, W. Va., the Du Pont Ammonia Corporation is expanding its plant for the production of ammonia, methanol, etc. The Du Pont Cellophane Co. is erecting a \$2,000,000 plant at Amphill near Richmond, Va., for the production of transparent paper, and is doubling the size of a similar plant completed last year at Old Hickory, Tenn. A second unit will be added to the Virginia transparent paper plant immediately. An expansion program estimated to involve the expenditure of over \$20,000,000 is under way at the Hopewell, Va., plant of the Atmospheric Nitrogen Corporation.

#### *Irrigation, Flood Control and Waterways Projects Claim Attention*

Over \$5,000,000 will be expended by the Baltimore Mail Steamship Company in providing adequate facilities at Baltimore for handling passengers, mail and freight. More than \$3,500,000 is being invested in river terminals, towboats and barges by the Mississippi Valley Barge Line Co. in connection with service on



the Ohio and Mississippi Rivers. A \$5,000,000 merchandise mart will be erected by the Terminal Railroad Association of St. Louis. Extensive additions are under way at the municipal grain elevator at Houston. In the aggregate, great sums will be expended in the South in connection with river and harbor projects, funds for which were recently provided in the bill signed by President Hoover. These sums will be supplemented with money made available through bond issues voted by various municipalities and districts anxious to speed the development of port facilities, channels and waterways.

In the Mississippi Valley, over \$35,000,000 is being expended this year by the United States Army Engineer Corps and, with work already under way on numerous important projects started last year and construction to be started on jobs for which contracts were recently let, this class of construction will provide employment for thousands of men and create a market for materials, machinery and supplies in wide variety. In Texas, huge sums in the aggregate are being expended for irrigation projects by various districts, involving the expenditure of from \$500,000 to \$10,000,000 each, not only for the irrigation of hundreds of thousands of acres, but also supplying towns and cities with water for domestic and industrial purposes and for the generation of electric power.

#### ***Southern Steel Mills Expand to Diversify Output***

While the steel mills in the South have not benefited to any great extent as a result of the big demand for steel pipe for line construction, because this class of product is not turned out in quantity, they are diversifying their output in keeping with the industrial needs of the section and to meet the demand for export through Atlantic and Gulf ports to Central and South American countries and for distribution to our own West Coast. Improvements under way by the Tennessee Coal, Iron & Railroad Co., call for an investment in excess of \$9,000,000. The Weirton Steel Co., Weirton, W. Va., is erecting a bar and structural mill at a cost of \$3,500,000, part of a \$10,000,000 program. Diversification of its output is provided in a comprehensive expansion program, necessitating an investment of \$17,000,000 to \$20,000,000 at Gadsden and Alabama City by the Gulf States Steel Co. The Rustless Iron Corporation of America, Baltimore, announced plans some months ago for a \$5,000,000 expansion program.

#### ***Paper Industry Centering South***

The Champion Coated Paper Co., Hamilton, Ohio, will, it is reported, invest

upwards of \$11,000,000 in a paper plant in Alabama on a tract of land acquired last year. The Southern Kraft Corporation, an International Paper subsidiary, is investing \$10,000,000 in a huge kraft mill at Panama City, Fla. The Brown Paper Co., Monroe, La., is doubling the capacity of its plant at a cost of \$5,000,000. The United States Cold Storage Co. will expend \$2,500,000 in a cold storage project at Atlanta.

#### ***\$600,000,000 for Roads and Streets***

Indications are that expenditures this year for paving, road and bridge projects in the 16 Southern States will set a new high record, totaling perhaps as much as \$600,000,000. An encouraging feature is the inauguration of work in volume in several States that have not previously gone forward with a comprehensive program, financed by bond issues. South Carolina has made an excellent start on its \$65,000,000 system financed by state bonds and in a single letting recently awarded contracts aggregating \$7,000,000. Other States that have progressed satisfactorily with road systems financed by bonds now find that revenues from the gasoline tax and license fees will permit them to amortize the bonds and maintain existing systems, as well as build several hundred additional miles of highways annually. This is particularly true of North Carolina and Missouri. Alabama, Kentucky and Tennessee are investing big sums in state-owned toll bridges financed by bonds issued against the structures. The toll receipts will be used to amortize the bonds and after all are paid off the structures will be declared free. By this method, which has the approval of the Federal Government, building of privately-owned toll bridges is discouraged and the States are able to provide costly structures without using funds from the gasoline tax and automobile license fees.

In the many fine subdivisions, undertaken in cities of the South and Southwest, and in scores of fast growing towns and cities, paving work is under way in volume. Authorities are determined to keep pace with the growth in industry and business, and are busy providing such facilities, as well as enlarged water and sewer facilities.

#### ***New Building for All Types of Service***

To summarize even in the briefest manner the new building enterprises recently let to contract and under way in the South costing \$500,000 each and up, is precluded by space limitations.

Private enterprise has not waited for the Government to launch its building program in the South. Rather, it has led the way, and so throughout this

section new buildings for every type of service are under way and still others are projected. The list includes professional buildings, especially designed and equipped to serve doctors and dentists; fine hotels, costly school buildings, replete with the most modern equipment and facilities; handsome bank and office structures, elaborately finished and fitted with every device demanded by modern business enterprises; especially designed union bus terminals to fill the need created by the expansion of motor bus travel. Also, large new store buildings are being erected, together with business structures of all types.

Despite the amount of money that has been invested in recent years in modern hotels and apartment houses, the section's needs are far from satisfied, judging from the numerous important structures of this type let to contract since the first of the year. The telephone companies, in order to keep pace with the growth of the section, are putting forth every effort to complete on time badly needed structures for new equipment and employees. Other public utilities are erecting structures for their needs. Meanwhile, cities, towns, counties and districts are erecting municipal buildings, art museums, hospitals, homes for aged and infirm, courthouses and other public buildings.

#### ***Volume of Residential Construction***

Residential construction, which has played so important a role in the building program of the South since 1921, figures prominently in 1930 activity and the saturation point is far from reached for the modern type residence, careful surveys indicate. In addition to the building of thousands of new homes, millions of dollars are being invested in modernizing, repairing and adding to existing dwellings, so that in the aggregate the volume of this class of construction mounts to a formidable figure.

#### ***Engineers for Paducah Bridge***

Harrington, Howard and Ash, Kansas City, Mo., designed and supervised construction of the Paducah River bridge over the Ohio River, described in the MANUFACTURERS RECORD of May 22. The article erroneously credited another firm as the designing and supervising engineers.

#### ***Wilmington Waterways Convention***

Dates for the Wilmington, N. C., Convention of the Atlantic Deeper Waterways Association have been set for October 7 to 10. The program is expected to be announced soon.

# Industrial Metamorphosis of West Virginia's Great Kanawha Valley

Producing Chemicals in Large Quantity and Wide Variety

By

LEWIS C. ALLEN,  
Parkersburg, West Virginia

**F**ORTY years ago, prominent men of this section sounded a note of concern over the future of the part of West Virginia drained by the Great Kanawha River and its tributaries. Then, this area was the center of an important lumbering industry, and exhaustion of the timber resources was the cause of the apprehension.

As had been predicted, the lumber industry became exhausted and the lumber mills and towns fell into resultant decline. But the cutover timber lands yielded another resource, coal, which saved the district from industrial decay. Farming and cattle raising also helped to make the economic change less noticeable. Discovery of natural gas, which was found to be available at a reasonable cost, influenced the location of new industries in the region, while a code of State laws fair, for the most part, to both manufacturer and workman furthered industrial development.

The spark which inspired the Great Kanawha District was the World War, which with its great need for chemicals almost overnight converted the district into the center of a great colony of Federal and privately owned chemical and other manufacturing plants. A large naval ordnance plant and an armor plate mill at South Charleston and a chemical plant at Nitro comprised the Federal Government's development.

Internationally known manufacturers also located in and about Charleston. Included were the Viscose Company,

manufacturer of synthetic silk; the du Pont interests, whose great anhydrous ammonia plant at Belle has the largest output of this product in the United States; the Carbide & Carbon Chemicals Corporation, with five factories operating in the valley; the Electro Metallurgical Company, manufacturer of ferro-alloys; the Clendenin Oil & Gas-

from the plants of the Westvaco Chlorine Products Corporation and the Belle Alkali Company. The Charleston portion of the district is now the largest amyl alcohol producer of the country, the Sharples Solvent Corporation's plant at Belle, adjoining Charleston, being a large manufacturer of this chemical. At Nitro, the new Elko Chemical Company, successor to the Southern Dyestuffs Corporation, will doubtless continue as the second largest producer of phenol of the nation. The Barium Reduction Com-



The Belle Alkali Company is a Large Producer of Chlorine.

line Company and the Clayco Company.

After the war, the fortunes of the Great Kanawha district, with only a few exceptions, steadily mounted instead of declining as many war-time industries had done. On January 1, 1928, the district became the largest chlorine producing center in the United States, with an output of more than 115 tons daily

pany, of South Charleston, manufactures the various barium salts, and the E. C. Klipstein Sons Company is famous as a producer of dyes.

A plant designed to make carbon tetrachloride and chloroform represents a \$1,000,000 investment by the Roessler & Hasslacher Chemical Company at St. Albans. The Rubber Service Labora-



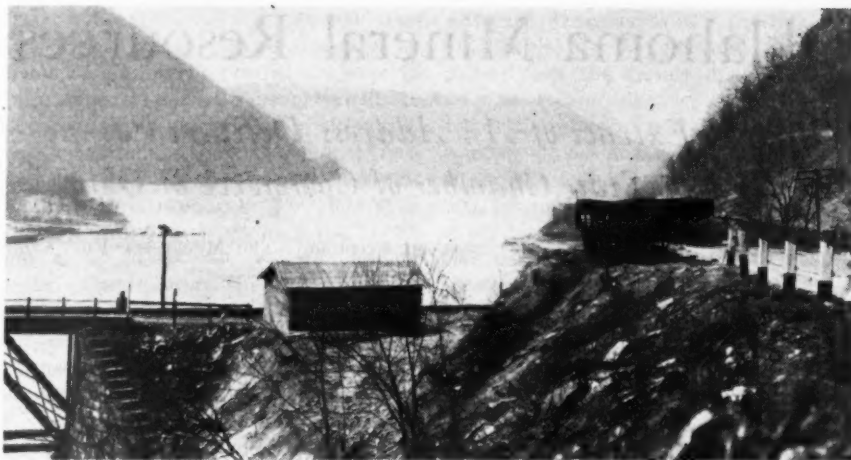
Gauley Bridge, W. Va., Where the Gauley River Flows Into New River Above Kanawha Falls, Creating the Great Kanawha. In the distance on the left is Gauley Mountain. A tunnel, several miles long, for hydro-electric development, is being driven under the mountain at Hawk's Nest; it will come out just above Gauley Bridge.



panies, Inc., manufactures a rubber accelerating agent and other rubber treating chemicals; the Joseph Dixon Crucible Company maintains a subsidiary for the treatment of graphite for lead pencils, and the Viking Gasoline Corporation is making cleaners and soaps. Also at Nitro is the plant of Seydel Chemical Company for the manufacture of benzoate of soda, and the Viscose Company has a \$5,000,000 plant in the district. Other chemical plants include the Evans-Walloway Lead Company, litharge and lead oxides, and the Cabin Creek Refinery of the Pure Oil Company, producing gasoline and lubricants.

Important expansions of the chemical industry going on at this time are a \$3,500,000 program of the du Pont Ammonia Corporation and the Belle Ammonia Corporation at Belle; the building of a 48,000-gallon capacity synthetic alcohol plant by the Carbide & Carbon Chemicals Company, on Blaines Island, below Charleston, and the entrance of the Koppers Company, of Pittsburgh, into the Great Kanawha district. It is reported that some of the outstanding chemical interests of Niagara Falls are taking up lands a few miles above Charleston. Building of a huge compressor station at Diamond by the Hope Natural Gas Company is also a recent event.

Repeal or modification of State laws that forbid the taking advantage of the waterpower potentialities of the State's streams has resulted in the starting of construction on hydro-electric projects that will bring about a much greater development of the Great Kanawha Valley. Through the New Kanawha Power Company, an affiliated organization, the Carbide & Carbon Chemicals Company, whose investments in West Virginia already are well past \$100,000,000, has commenced work on a hydro-electric generating plant at Hawks Nest that is understood to exceed any such project before undertaken in the East. Waters of the New River are to be impounded by a dam and a tunnel to be driven under a mountain to tap a deep gorge about three miles distant. The drilling of shafts down to the lo-

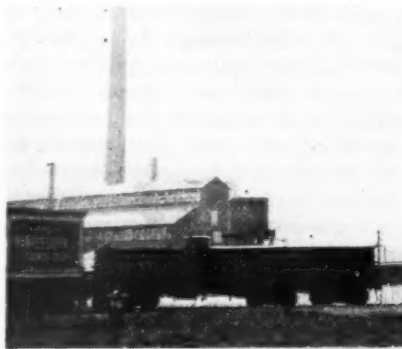


Here the Great Kanawha River Is Formed

In foreground are the freight station and contractors' equipment for use on the hydro-electric development of the New-Kanawha Power Company.

cation of the tunnel is under way, and huge cuts along the face of the mountain for roads and buildings are now being made by contractors.

A short distance below the site of



Plant of Sharples Solvent Corporation at Belle, Where Large Quantities of Amyl Alcohol Are Produced

this development at Hawks Nest are a hydro dam and plant controlled by the Electro Metallurgical Company, a subsidiary of the Carbide & Carbon Chemicals Company. Not many miles above the Hawks Nest development is a water-power site which Eastern capitalists plan to develop.

Extension of the New York Central Railroad Lines, now being completed

from the Gauley bridge to open a way to the top of the mountain at the back of the Hawks Nest project, will tap a region rich in natural resources and is a part of the company's system on the side of the Great Kanawha Valley from Gauley bridge to Point Pleasant. The Virginian Railway, entering the valley at Deepwater, plans to cross the river with a high bridge and make connection with the Atlantic Coast Line. Occupation of both sides of the New River Valley for many miles above the Gauley bridge enables the Chesapeake & Ohio to share in development of the mountains above New River Gorge.

By a system of Government locks and dams, barges can navigate the Great Kanawha River the year round and can deliver freight to Pittsburgh, Chicago and New Orleans. The Great Kanawha Improvement Association, an organization of shipping and river interests, has made a successful campaign to have this channel deepened to nine feet, so that boats of large draft can reach Charleston. A system of good highways provides an additional means of transportation.

Among other factors contributing to development of industry in the Great Kanawha district are an abundance of pure water from both the Gauley and New rivers, which flow together at Kanawha Falls to form the Great Kanawha River, and a plentiful supply of American-born labor. The mountaineers of West Virginia, trained through work in the lumber camps and mines are much sought after by the advancing industries.

Also looming large in the general scheme of industrial development is the fact that within 50 miles of the Great Kanawha Falls over 50,000,000 tons of coal, 1,000,000,000 cubic feet of natural gas, and 3,000,000 barrels of oil are still in the ground.



Important Expansions Are Under Way at the Belle Plant of the Du Pont Ammonia Corporation, near Charleston.



# Oklahoma Mineral Resources as a State Asset

*Extract of An Address Delivered at the Annual Meeting of the State Chamber of Commerce of Oklahoma at Tulsa, Okla.*

By J. G. PUTERBAUGH, President, The McAlester Fuel Company, McAlester, Okla.

THE State of Oklahoma ranks second only to Pennsylvania in the total value of mineral production. While as a State, we are still only 23 years old and have only started on the task of really developing our natural resources, our annual crop of minerals, including petroleum, gas, coal, lead, zinc and gypsum, is bringing into the State approximately \$600,000,000 per annum. The importance and the credit of nations are determined largely by the extent and the value of their natural resources, and particularly by the value of their mineral deposits. First, because the nation which can supply itself keeps its money at home, and if its supply and production are sufficient for export it brings new money in and thereby preserves a trade balance in its favor, and also because a trade balance is one of the important things on which the permanent prosperity of a nation rests.

It is clear, therefore, that the man who desires to live in a prosperous portion of this great country should give as careful consideration to the natural resources of the several states as our astute international bankers give to the appraisal of the natural resources and particularly of the mineral resources of the European nations when they offer us their bonds for money.

And in order that the statistics which I am about to give you in respect to Oklahoma's wealth may be the more appreciated, and in order that you may appreciate the tremendous economic importance of our mineral deposits as a State asset, I wish to remind you that the physical resources of every State and of every nation come under one of three general kingdoms, viz: the vegetable, the animal or the mineral. Vegetable and animal life are replaceable and may be increased or decreased practically without limitation. While one state may have more or less advantage of others in respect to the fertility of its soil, rainfall and climate, or may be particularly adapted for the raising of live stock, no state can claim any great, at least no permanent advantage in respect to the business of agriculture or the raising of stock; but the earth's deposits of the minerals which are so vitally necessary to the growth and development of our present civilization have not been so generally or equitably

distributed; and again, the total supply of minerals, including petroleum and natural gas, is fixed and determined and decreasing, and it is beyond the genius of man to increase them. The profits which the individual or a state may derive from a given line of business or industry are generally in proportion to the extent that competition in that line of business is non-existent or may be decreased.

States that produce only wheat and other grains are in competition with every other state and nation where grain may be grown, and enlightened people are now everywhere attempting with an increasing measure of success to grow their own necessities, and one of the principal reasons the outstanding problem of this nation today is the Farm Problem is that every farmer in this country is in unlimited and unlimitable competition with every other farmer and stock raiser on this earth. It is clear, therefore, that those states and nations which are relying and must continue to rely chiefly on the production and sale of vegetable and animal products must recognize the necessity of a continuance of unlimited competition, and the purpose of this diversion is to get before you clearly that where a state or a nation is blessed with an unusually large percentage of the important minerals, upon the continued supply of which our present and future material comfort and prosperity depends, that nation or that state has a tremendous material advantage which is not likely to be lessened, but which will undoubtedly be multiplied many fold as the years go on and as the population of the nation and the earth increases.

No approximately correct appraisal of the deposits of petroleum, gas, coal, lead, zinc, asphalt, gypsum and other minerals so abundantly found in Oklahoma can be made without a full realization of this important economic difference between the non-increasable and slowly diminishing mineral reserves of the nation and the products of the vegetable and animal kingdoms which may be increased without limit. The meaning of this truth is that the millions of consumers of this great country and of every nation must, to satisfy their increasing and multiplying demands for minerals, go to and barter with those few states to the safe keeping of which

nature has entrusted the bulk of the earth's mineral wealth.

## Petroleum

Oklahoma's most valuable mineral resource is petroleum. Of this mineral the entire world produced, during the calendar year 1929, 1,488,600,000 barrels. Of this, there was produced in the United States 1,006,000,000 barrels or approximately 67 per cent of the world's total. Of this gigantic wealth, Oklahoma produced in 1929 254,000,000 barrels or 25.6 per cent of the total in the United States, and 17 per cent of the total quantity of petroleum produced from this globe.

This tremendous recovery of wealth from Oklahoma brought the producers \$300,000,000. Only Texas and California have produced slightly larger yields, but because of the high average quality of its oil the petroleum produced in Oklahoma exceeds in value by \$100,000,000 per year the value of the petroleum recovered from either of the only two other states which could in any wise be classed as rivals.

## Natural Gas

Along with its oil and more or less as a by-product of the oil producing industry, Oklahoma produced in the year 1929 approximately 350,000,000 cubic feet of natural gas. This product is now being piped and extensively used not only for domestic and steam purposes throughout Oklahoma, but, as everyone who reads the papers knows, 24 inch gas lines are now carrying natural gas long distances to the cities in many neighboring states. Until a few years ago, the oil well which proved to be only a gasser was a distinct disappointment, and unless it happened to be located within easy reach of a market, the well was capped and indefinitely remained dormant and unproductive; but now every gas producing well is promptly connected with the network of long distance pipe lines and its product carried to market.

While it is impossible, as in the case of coal, to estimate with accuracy the amount of petroleum or natural gas which may be reasonably produced from a given area of territory, even though it be productive territory, the art of finding and producing petroleum and gas has now advanced and developed to

the point where those informed assure us that production will continue for many years to come, and if not intelligently controlled may, for a considerable period, be increased rather than decreased; in fact, the difficulty with the oil and gas industries today is that we are producing more than we should produce until the peoples of South America, Europe and Asia enter upon a more universal use of these products. I am a producer and distributor of Oklahoma coal and until this flood of petroleum and this fog of natural gas swept in upon us to make the State richer and the coal operator poorer, "Coal was King" and at the head of the list of Oklahoma's mineral resources, and hence it is not without a measure of reluctance that I make these admissions as to the economic importance of the petroleum and natural gas industries and reserves of this State.

#### Zinc

There is produced in the United States 40 per cent of the world's supply of zinc, and 30 per cent of the world's supply of zinc comes from this state. According to Government reports, production of zinc during 1927 was 180,250 tons, with a market value of \$21,000,990. Approximately 115 zinc mines are in operation and these give employment to approximately 5000 well paid men. Zinc is a metal the use of which is increasing yearly. Thousands of tons are now used annually in the galvanizing of iron and in the ever increasing production of storage batteries, and as we as a nation become more intelligent and learn to build more permanently we will cover our homes and buildings with shingles made of this fireproof and everlasting metal.

#### Lead

Lead ranks second to zinc in Oklahoma metallic minerals. Our lead is a by-product of zinc mining. Our annual production in 1928 was approximately 150,000 tons; and for this yield, the producers received \$5,000,000. A large portion of the lead used in the manufacture of the world's supply of electric batteries, lead pipe, and of the miles of lead tubing by the use of which the telephone companies are now putting their wires under ground is furnished by Oklahoma labor from Oklahoma mines.

#### Coal

There is deposited in Eastern Oklahoma, adjacent to the cities of McAlester and Henryetta, approximately 79,000,000,000 tons of the highest grade bituminous gas coal and semi-bituminous smokeless coal found in America. The area of workable coal deposits includes approximately 10,000 square

miles. As yet, only 100,000,000 tons have been mined. Approximately 50 developed mining properties are now in operation. These give employment to 6000 well paid miners. Notwithstanding the abundant supply of cheap natural gas and fuel oil, the coal mines of the state are producing 3,000,000 tons per annum and at least half the year's coal crop moves out to surrounding states. The value of the annual output is approximately \$11,000,000.

Under the present system of refining petroleum, about 40 per cent of the crude oil is converted into gasoline and other refined products, while some 50 per cent is sold for fuel purposes to industrial plants and steam railroads. Several of the larger refiners are now, at great expense, equipping their refineries so they will be able by use of the hydrogenation process to convert 100 per cent of a barrel of crude into gasoline. It is believed that all refineries will within the next few years do likewise, and this will remove fuel oil from the field of competition with coal and increase the demand for Oklahoma coal at least 6,000,000 tons per year; and in later years, when natural gas, by virtue of wider distribution, assumes its proper value in the list of fuels and is restricted by its market price to the high grade uses for which it should be conserved, the people of the rapidly developing states of Oklahoma, Texas, Kansas, Missouri, Nebraska, Iowa and Minnesota will call upon the coal mines of Oklahoma for many additional million of tons of domestic and steam coal annually, and hence the billions of tons of coal of proven high quality stand like a stone wall behind the petroleum, the gas, the zinc, the lead, the glass, the brick and the smelting industries and insure to every present and prospective citizen not only of Oklahoma but of the Middle West and Southwest a practically perpetual supply of high grade dependable and safe fuel at as low a cost as fuel of equal grade and quality can be obtained in any state of the Union.

#### Power

Down through the centuries man has grown tired of physical work, and with a slowly dawning intelligence he began to think out ways and means, first, of unloading his work upon animals and then upon mechanical devices; then, in the latter part of the eighteenth century, James Watt improved the construction and power of the steam engine, that faithful old servant which took from the back of humankind its crushing load of labor and pulled in a new civilization. The steam engine speeded construction and decimated distance; it began to hoist from the earth the coal which gave it life; it made

railroad transportation possible and enabled ships to circumnavigate the globe; then the genius of Edison gave us the steam electric generator, and today the electric power plants of this country alone are developing sufficient electricity to perform the labor of 350,000,000 men and we have become so dependent upon power that it is the first consideration of industry and domestic comfort, and next to air, water and food the basic requirement of our present civilization.

A small percentage of the total power requirements of this country come from water power, but these plants are for the most part in isolated sections.

The great bulk of the power which is today turning the wheels of industry and furnishing water, light, heat and a majority of the comforts of life to humankind is developed from coal, gas or fuel oil. No state in the Union is blessed with such an abundant supply of each of these three fundamental fuels as is Oklahoma, and as a result no other state in this great sisterhood of states is so fortified and so assured of a permanent supply of power at so low a cost.

Each of the mineral producing industries in itself is attracting to this state large numbers of auxiliary industries which employ labor and distribute large weekly pay rolls and this auxiliary population must have homes, transportation, food, clothing, education and amusements and this has created here a large consumer demand for every manufactured product.

Prior to October, 1907, the territory now known as the State of Oklahoma consisted of the semi-developed territory of Oklahoma on the west and of the entirely undeveloped and unsettled Indian Territory on the east. In October, 1907, we were admitted to the Union as a State. At that time, and for a number of years thereafter, our citizenship thought principally in terms of agriculture and stock raising. Our average banker knew something about financing agriculture, but very little about financing industry. Interest rates were high and money scarce at eight and ten per cent. As a people, we were not then and we are not yet "industrially minded." We raised wheat, corn, cotton and cattle. We produced coal because we needed fuel, but from this comparatively recent and primitive beginning we have, because of our varied and wonderful resources, advanced to a position of first importance among the states.

Our state contains within its boundaries two and one-third per cent of the area of the United States and only two per cent of the population, but we have within these same boundaries, of the country's total, five per cent of the coal, 20 per cent of the natural gas, 28 per



cent of the petroleum and 11 per cent of the total mineral wealth of the greatest and most rapidly developing country on the globe. We have the markets and the purchasing power, but as yet we are producing only six-tenths of one per cent of the manufactured products.

Much of the wealth which we have produced and accumulated during the past two decades remains and is being invested in Oklahoma. There is no longer a serious dearth of capital and our financial institutions have grown and are now able and willing to render to industry as favorable service as can be had in older states. What Oklahoma needs at this time is men who have had experience and training in the successful management of the industries which manufacture the many items for which there is large market in the Middle West and throughout the country, but which are not now being produced in this state.

The principal purpose of this State Chamber of Commerce is to develop and furnish in convenient form dependable information along these lines. It is attempting to assemble the facts and to make them promptly available to those who want dependable information. Every chamber of commerce in the state should be affiliated with the State Chamber in this most constructive work. The facts alone are sufficient to sell Oklahoma to the man or the enterprise that will obtain and consider them. Like the lamp of Aladdin these minerals and the other resources that God has given Oklahoma need only to be touched by the quickened intelligence of industrious and progressive men, men of initiative and courage to assure an abundant future. So do the facts concerning the marvelous resources of Oklahoma and its rapidly developing future say to those manufacturers in the older states who are anxiously seeking new life, new markets and a new prosperity—"Here is Opportunity."

### 112-Mile Pipeline Started

Tulsa, Okla.—Construction has started on a 112-mile high pressure pipeline to connect the Quinton fields of Oklahoma with Tulsa, Muskogee, Boynton, Sapulpa and other communities. The enterprise has been undertaken by the Southwestern Natural Gas Co., a subsidiary of the Appalachian Gas Corp., New York, and the line is expected to be in operation by early fall. The A. O. Smith Corp., Milwaukee, Wis., has contract for the pipe and Williams Bros., Tulsa, for general construction. Ralph E. Davis, New York, is the engineer. The Southwestern Natural Gas Company has opened an office in the Exchange National Bank Building, Tulsa, with L. E. Farley in charge.

## SOUTH CAROLINA CEMENT CONTRACTS

### State Purchases 2,750,000 Barrels for Roads —Asks Bids on \$5,250,000 of Road and Bridge Construction

Contracts have been awarded by the State Highway Department, Charles H. Moorefield, state highway engineer, Columbia, S. C., for the purchase of approximately 2,750,000 barrels of cement for road construction, at a cost of more than \$6,500,000. The average net cost of the cement delivered to various points throughout the state will be between \$2.35 and \$2.40 per barrel, depending upon quantities delivered for the different projects.

The Carolina Portland Cement Co., Charleston, was awarded contract for 500,000 barrels to be delivered up to December 31, 1931, with an option for 500,000 additional barrels to be delivered in 1932. The net price is \$2.40 per barrel f. o. b. Columbia, with freight adjustments in case of delivery to other points. The point of origin named in the contract is Knoxville, Tenn., where the plant of the Volunteer Portland Cement Co. is located. Contract was awarded the Lehigh Portland Cement Co., Birmingham, Ala., for 225,000 to 300,000 barrels for use in Orangeburg, Calhoun, Spartanburg and Abbeville counties. Based on Charleston delivery, the net price is \$2.05 per barrel for the Orangeburg and Calhoun County projects, calling for about 105,000 barrels; \$2.58 per barrel for the Spartanburg County projects, and from \$2.58 to \$2.62 for the Abbeville County work, depending upon point of delivery.

The National Cement Co., Birmingham, was awarded contract for 350,000 barrels to be delivered up to June 30, 1931, and the Lone Star Cement Co., Birmingham, for 300,000 to 500,000 barrels to be delivered up to December 31, 1931, the latter contract being similar to that of the Lehigh Portland Cement Company, except that the projects listed are provisional and provisions are made for substitutions. Contract was awarded to the Pennsylvania-Dixie Cement Corp., Chattanooga, Tenn., for from 300,000 to 600,000 barrels to be delivered up to December 31, 1931, and to the Signal Mountain Portland Cement Co., Chattanooga, for 250,000 to 500,000 barrels to be delivered up to the same date.

In connection with the cement contracts, it is interesting to note that bids will be opened July 29 by the Commission for road and bridge construction estimated to cost \$5,250,000. The proposed work will involve more than 163 miles of paving; about 65 miles of surface treatment; 63 miles of grading with some sand-clay work, and the construction of 15 bridges. According to

Ben M. Sawyer, chief highway commissioner, the commission will furnish cement on all concrete paving and bridge projects, at \$2.52 per barrel delivered at the nearest railroad point and subject to the usual return-sack privilege.

This letting will be the second largest the highway department has made, being exceeded only by the May letting which involved about \$7,000,000. The June letting involved about \$4,000,000. When the July contracts shall have been awarded, they will bring the total of contracts awarded within three months to approximately \$16,000,000. Funds were provided by a \$65,000,000 bond issue.

### Alabama to Build Trunk Roads

Montgomery, Ala.—According to Governor Bibb Graves, bids will soon be invited by the State Highway Commission for the construction of trunk roads, and with this start the Governor will place before the counties through which the roads pass, a plan for matching federal funds now available to complete the work. More than \$4,000,000 of federal funds to be matched by state funds was placed to the state's credit July 1 and a number of counties affected have expressed a willingness to match the funds.

### Wire for Airplane Antenna

Washington, D. C.—Approximately 3,000,000 feet of wire have been ordered by the United States Government from the Copperweld Steel Co., Glassport, Pa., for use by the United States Air Service as airplane radio antenna wire. In use, the wire is retained on a reel in the airplane and after sufficient elevation has been reached a weight is released which carries the wire out behind the plane.

### Gas Companies Plan Merger

Houston, Tex.—Stockholders of the United Gas Corp., New York, and the United Gas Co., Houston, will meet August 11 to consider an agreement for the merger of the two companies under the name of the United Gas Corporation, Incorporated. In March of this year, the United Gas Corporation acquired majorities of the common stock and preferred stock of the United Gas Company and substantial percentages of the preferred stocks, bonds and debentures of subsidiaries of that company, as well as 100 per cent of the securities of the Louisiana Gas & Fuel Company, Shreveport. The Electric Power & Light Corp., New York, owns a majority of all the voting stocks and option warrants, including practically all the \$7 second preferred stock of the United Gas Corporation.



## Progress on \$15,000,000 Sewerage, Water and Drainage System in New Orleans

**F**ORMAL dedication of two of the enlarged pumping plants, previous completion of other units and construction well under way on still other factors in New Orleans' \$15,000,000 sewerage, water and drainage program indicates the progress being made on this immense project. To date, contracts let in connection with the program total \$5,559,852, of which \$3,021,313 in work has been completed. Other contracts aggregate \$1,650,000.

Seven 14-inch "Wood" pumps, each costing \$20,000 and each driven by a \$25,000 motor, comprised the new equipment installed in the two plants. Plant No. 1 has a capacity of 5250 cubic feet per second, double the capacity before the 1000 cubic feet per second pumps were installed. This plant drains 5300 acres through the Metairie relief canal.

The capacity of plant No. 6 was increased from 2800 to more than 6000 cubic feet per second by installation of four "Wood" 1000 cubic feet-second pumps, to drain 11,000 acres, or all of uptown New Orleans. H. Pratt Farnsworth was contractor for this plant at \$183,879, while John Riess built plant No. 1 at a cost of \$153,425. Dibert-Bancroft & Ross Company built the pumps at a cost of \$138,600, the motors costing \$183,256.

Improvements to the Metairie relief canal, connecting the two pumping stations, are nearing completion, at a cost

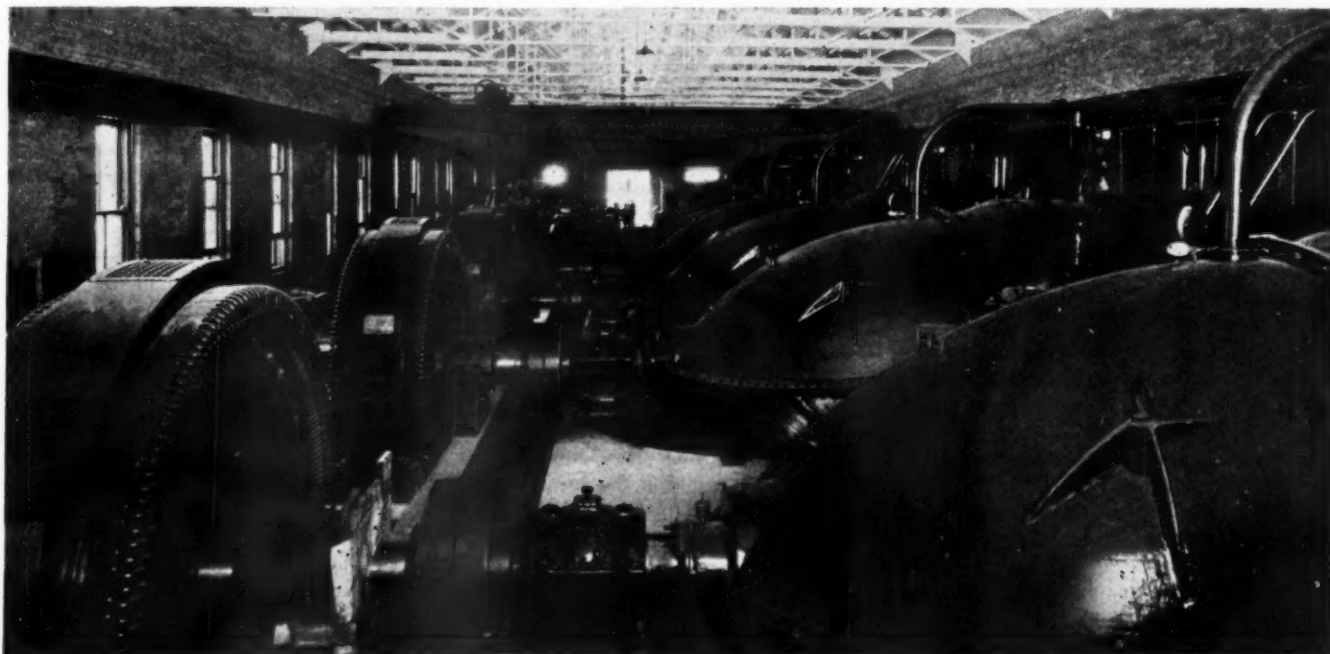
of over \$1,270,000. This canal is 85 by 12 feet and its capacity is being raised from 2200 second feet to 6000 second feet, or twice the average velocity of the Mississippi River. The Ruller Construction Company is contractor for this work. The Metairie outfall canal, now being completed by the McWilliams Dredging Company, extends from station No. 6 to Lake Ponchartrain, and its capacity is being raised to between 6000 and 7000 second-feet.

In addition to these units, Nos. 1 to 4, there are 30 others involved in this immense program, some of which are completed, or virtually so. Unit No. 5 is a \$340,000 project, on 16- to 18-foot wide concrete lines and covered. Thomas H. Brockman was the contractor for this completed project. Unit No. 6 is a minor project, also completed, and No. 7, too, is finished.

Unit No. 8, a \$2,850,000 project which provides for increased capacity for the water purification plant, is virtually completed. The plant capacity has been raised practically from 40,000 gallons per day to 112,000 gallons, with a maximum possibility of 160,000 gallons, through installation of 18 additional filters. These bring the total to 28, each having a capacity of from four to six million gallons each day. The plant is designed to care adequately for the water needs of the city until its population reaches the 1,000,000 mark.

An enlarged power station to supply the entire sewerage, water and drainage systems comprises unit No. 9, which also is nearly completed. The Westinghouse Electric & Manufacturing Company, Lasker Brothers Iron Works, Kennedy-Van Suan Co., Air-Preheater Corporation and J. M. McGowan have contracts in this connection. The power facilities were increased from 12,000 kilowatts to 27,000 kilowatts through installation of three 4000-horsepower boilers and a 15,000-kilowatt Westinghouse generator. The underground cables involved under unit No. 10, which has been completed at a cost of \$173,491, extend over an area of seven miles and carry about half the power necessary to operate stations 6, 1, 2 and 3. Unit No. 11 is the Central Power Station interchange and provides for a 5000-kilowatt interchange with the New Orleans Public Service lines, affording protection in event of a complete breakdown of the Sewerage and Water Board plant. This unit includes four emergency 48-inch pumps, to handle 320 cubic feet of drainage water and estimated to cost \$89,000, and a building estimated at \$87,000. Interchange motors will be furnished by Fairbanks Morse & Co., at a cost of \$100,000.

Unit No. 12, or pumping station No. 2, drains the business district. New installations increasing the capacity to 3500 second-feet, include two "Wood" 14-foot



Plant No. 1, With Its New Pumps, Now Has a Capacity of 5250 Cubic Feet Per Second.



The New Metairie Relief Canal, Connecting the Two Pumping Stations, Is 85 by 12 Feet, and Has a Capacity of 6000 Second Feet.

diameter, 1000 second-foot capacity pumps driven by motors furnished by the General Electric Company. Lionel Favrot Company is the contractor, while Dibert-Bancroft & Ross Company built the pumps, named for their designer, A. Baldwin Wood, mechanical engineer for the Sewerage and Water Board. The 2400-foot concrete lined Orleans relief canal is unit No. 13. It increases the discharge capacity and velocity from station No. 2 and will cost \$200,000.

Pumping station No. 7, or unit No. 14, will probably cost \$210,000. Two new 1000 second-foot pumps will be ordered, pending decision on an additional bond sale, the work to be completed within 18 months and to raise the total pumping capacity from 1500 to 3500 second-foot. Bids are ready to be opened on a \$320,000 pumping station, unit No. 15, to have three 1000 cubic feet second pumps, to raise its capacity from 2000 to 4500 cubic feet-seconds.

The London outfall canal, unit No. 16, is to be enlarged at an approximate cost of \$35,000, to provide additional outflow from station No. 3. Unit No. 16½ is the main canal from Louisa street to Marnigny street and London avenue, a distance of 10,000 feet. Dimensions are 25 feet by seven feet. For the St. Claude avenue canal, unit No. 17, A. P. Boh & Co. are the contractors at \$140,000, and have practically completed the project. Unit No. 18, the North Prieur street canal, is also practically completed, under the O'Brien Construction Company contractors. This \$120,000 project cares for the area from Louisa street to the Industrial Canal. A. P. Boh & Co. have nearly completed unit No. 19, the North Rocheblave street canal.

Unit No. 20 is the St. Roch's pipe line, extending 7000 feet and costing about \$150,000. Unit 21, the Monroe avenue canal, gives the St. Anthony's street system increased outflow facilities. Plans are now being prepared for the Lakeview

drainage system, which comprises unit No. 22. The Levee Board is making rapid progress for construction of unit No. 23, a back levee to supply the backbone of the Algiers drainage system, covering 11,000 acres. This project is to cost \$175,000 and to be completed within 18 months. John McWilliams now has work well under way on unit No. 24, to provide a direct outfall to the back levee for the waters of the main thoroughfare of Algiers. Unit No. 25, or station No. 9, at Algiers, will discharge into the Magellan street and back levee canal at practically 900 cubic feet per second. Thomas H. Brockman, the contractor, now has this \$190,000 project well under way. Unit No. 26, the Algiers outfall canal, is to send water to the Hero station, a distance of about seven miles. McWilliams Dredging Company is contractor for this \$170,000 project.

To enable the Hero pumping station to care for the additional water brought to it by the Algiers canal a 1000 second-foot capacity pump will be installed at a cost of \$100,000. This is known as unit 27. Unit 28, costing \$400,000, is a suction pumping station at the intake of the water purification plant, increasing the capacity of the two 48-inch intake mains from 80,000,000 to 160,000,000 gallons daily. Main sewers in unit No. 29 were completed last year by John D. Mooney, contractor, at a cost of \$270,000. John D. McCrary, contractor, completed the main sewer included in unit No. 30, some time ago. This 10,500-foot concrete sewer, four feet square, will form the backbone for the laterals and sub-mains to be installed this year and in 1931.

The Globe Construction Company is contractor for unit No. 31, the discharge main into the river along St. Ferdinand avenue. This project cost \$85,000; the necessary 48-inch pipe, \$153,000. Unit No. 32 is a pressure main completed in

the Lakeview area by John D. McCrary. It includes 5500 feet of 36-inch pipe, 2400 feet of 42-inch pipe and 11,000 feet of 48-inch pipe, and is for handling dry weather flow from drainage stations 6, 7 and 3. Several pumping stations comprise unit No. 33, which is to be completed by H. N. Moody, at a cost of \$44,000.

Contract will be let in 1931 for unit No. 34, providing sewerage connections for 2400 premises in Gentilly, Edgewood and Lakeview. This project will cost \$500,000 and each of the three portions will involve 12 miles of pipe.

### Gadsden Feels Impetus of Increased Industrial Payrolls

The Gadsden Times reports that beneficial effect of the additional millions being expended at Gadsden by the Gulf States Steel Co. is beginning to appear in the form of increased employment and increased payroll. The swinging into action of the new \$2,000,000 plate mill is heartening at the present and prophetic for the future. It is expected that 900 additional men will be given employment in July.

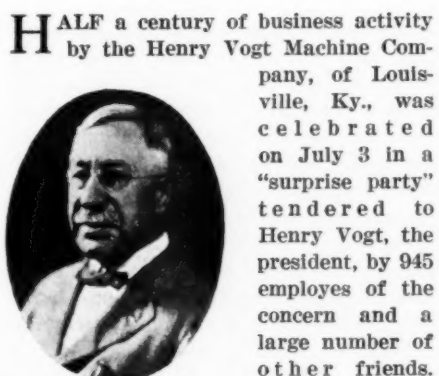
The expenditures by the steel company of some \$20,000,000 includes units still to be erected, such as four open-hearth steel furnaces, one 500-ton cast furnace, 37 by-product coke ovens, a duplicate power plant and other improvements.

### High Point Furniture Show

A substantial percentage of 6500 furniture dealers in all sections are expected by C. F. Long, manager of the Southern Furniture Building, Inc., to attend the annual midsummer Southern furniture show at High Point, N. C., July 21 to August 2.



## Half a Century of Enterprise



Henry Vogt, President Henry Vogt Machine Company

story structure.

On behalf of the city, Mayor William B. Harrison paid tribute to the business foresight and acumen which had impelled Mr. Vogt to start and develop an industry which now employs nearly 1000 persons. Colonel C. C. Mengel, president of the Mengel Industries, another great manufacturing concern, described Mr. Vogt as one of the greatest factors in the industrial development of Louisville, and Captain Charles F. Huhlein, chairman of the B. F. Avery Company, spoke on the same line. Theodore Ahrens, president of Standard Sanitary, wrote a laudatory letter.

In speaking of Mr. Vogt, and the foresight and ability which had enabled him to develop an industry which now

covers 19 acres of land from a small machine shop of fifty years ago, each speaker emphasized his public spirit, which made him available whenever called upon to serve upon various boards and to contribute to public good. He was ever conscious of the welfare of his employees, and this consciousness made him of great value to the welfare of the entire city of Louisville.

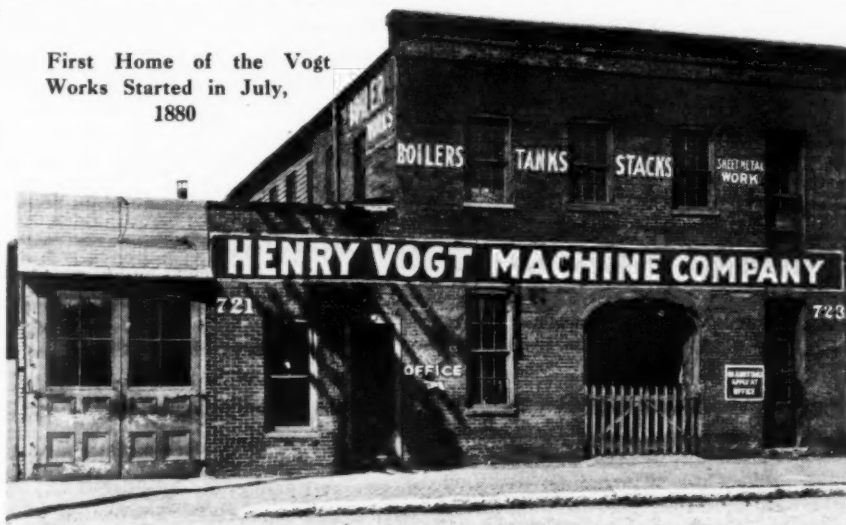
Capt. Huhlein told of an incident of

determination have built a business which is known the world over, and which has attracted millions to Louisville to be paid out in wages.

As a "birthday present" from the company, Mr. Vogt presented an eight-day clock to each employe, while the employes expressed their congratulations in the form of a suite of office furniture, as well as in words.

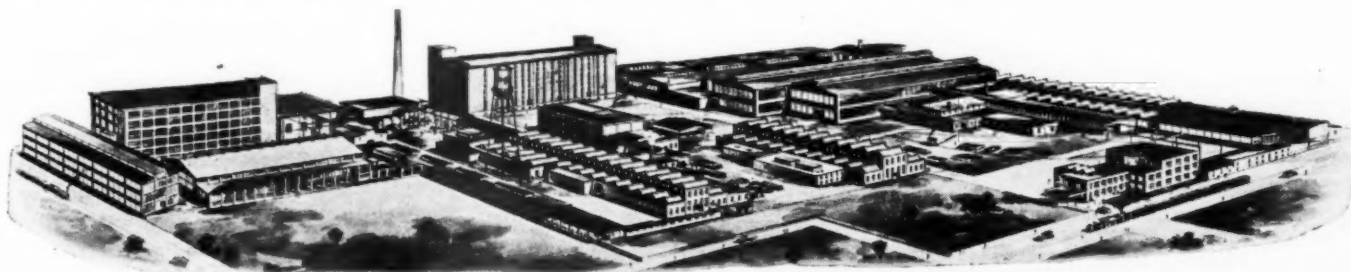
Besides having the largest riveting

First Home of the Vogt Works Started in July, 1880



fifty years ago when, as a reporter for Bradstreet's, he had to call on Vogt for a statement. He found him with but little capital, but with a knowledge of his business and a determination to pay as he progressed. This knowledge and

bull in the world and contemplating the installation of the largest drop forge equipment, the Vogt Company enjoys the distinction of not having laid off any employes during the business depression.



Plant of the Henry Vogt Machine Company, Louisville, Ky., July, 1930, Covers 19 Acres and Has 945 Employees

### Contract at \$1,178,000 for Hospital

New Orleans, La.—General contract was formally awarded to R. P. Farnsworth & Co., New Orleans, at \$1,178,000, to erect the new United States Marine Hospital here, including a 5-story main building, 3-story administration building, 4-story surgical ward, laundry, power plant, garage, refrigeration plant, officers' and nurses' quarters, workshops, storage building and other facilities. Plans and specifications were prepared

by Jas. A. Wetmore, Acting Supervising Architect of the Treasury Department.

### Power Company Shows Growth

Chattanooga, Tenn.—For the first five months of this year, construction expenditures of the Tennessee Electric Power Company amounted to more than \$3,100,000, as compared with \$1,500,000 for the corresponding period in 1929, according to Joseph C. Guild, Jr., vice-president and general manager. The

construction program for 1930 calls for an expenditure of \$8,000,000, and projects under way or soon to be started include 17 miles of 120,000-volt transmission line from the Hales Bar plants to Chattanooga; 18 miles from Hohenwald to Mt. Pleasant; 30 miles of line from Murfreesboro to Franklin; 57 miles from Waynesboro to Lexington, and 25.5 miles from Estill Springs, via Lynchburg, to Fayetteville. All these lines, except the Hales Bar-Chattanooga project, will operate at 44,000 volts.



### Hard Times?

(From Charlotte Observer)

Hard times? In the language of the street we might politely inquire, "How do you get that way?" As an impartial observer, with no axe to grind, we set forth the other afternoon into the streets of Charlotte much in the manner of the famed Sultan of Bagdad to see what was what. And what did we find? Surely there was no depression apparent in the sights of Tryon street. It was bargain day at Charlotte's largest theater and by 3 o'clock every seat in the spacious orchestra section and even to the top row of the balcony was crowded. Many were standing, awaiting seats down front for the vaudeville. Other shows were similarly filled with young and old in holiday mood.

Store after store was thronged with well-dressed women and girls with a sprinkling of men shoppers. Not a one of them appeared to be one whit less well-dressed than those of the Tryon street crowds of a year or five years ago. Indeed, Summer fashions were never so well pronounced in costly and tasteful apparel. Up and down the street rolled automobiles, large and small. There was the customary grumbling over delays in traffic while pedestrians scooted to cover. Crowds filled the street cars and got off and on at every stop.

At the "Tom Thumb" golf links that have lately taken the public fancy there were many whizzing away at the balls on the miniature links and of course, the regular-sized links around Charlotte were filled. Several golfers told us that this is the biggest golf year in the history of the city, hundreds having taken up the game who had not played before. The new municipal course has been thronged from its opening day.

In an industrial section of the city several new warehouses and business buildings are arising to add to Charlotte's imposing list of substantial structures of this sort. In one of the best residential sections several new apartments are going up and in the entire city more than two score residences are under construction.

Scores and hundreds of Charlotteans go to Wrightsville and Myrtle beaches, Blowing Rock, Hendersonville, Asheville, Lake Lure, and other resorts every weekend. Many are spending the summer there. Local people are having "the time of their lives" in Europe this summer and others are "seeing America first." The rest of us are keeping the radios, electric refrigerators and cars running all day and night.

Mecklenburg county has never looked better, with the soil showing rich and damp under the influence of late rains and the plants are sturdy and strong.

Fruit in this county and down towards the Sandhills is in excellent shape for a good truck season. Wheat and oats have returned fair yields in face of the spring drouth. Blackberries are ripe and are being picked by the bushels.

All this is by way of introduction of saying that the present depression, slump, hard times, or what you will, is nineteenth imagination and one-tenth reality. Of course, with every one believing so hard in business depression that he stops buying, the channels of trade will tend to become stagnant.

But why should there be any depression? The best minds of the country are powerless to give one substantial reason and one man's opinion is as good as another's. There is more wealth, more money and easily accessible money at ridiculously low interest rates, than ever before. Public building is on the boom and will continue so for a year to come. There are more foodstuffs, more raw materials, more factories for the consumption, more of a potential market to buy than ever before. Retail stocks have never been lower in years. A return to normal buying is bound to come and when it does, factories will not be able to fill the orders.

All needed now is firm determination to talk good times, conservation of money and energy by intelligent buying, selling and commercial intercourse. The United States is not in nearly so bad a shape as the pessimistic among us who like to mourn, instead of opening up their hearts and pocket books to join in good business and good times, would have us believe.

### Slight Decrease in Cotton Acreage

In spite of the suggestions of the Federal Farm Board and the warnings issued by others interested in the South's cotton situation, the cotton report of the Department of Agriculture, issued July 8, estimated that the acreage of cotton in cultivation in the United States is 45,815,000 acres, which is only a decrease of 2.7 per cent from the acreage on July 1, 1929, and 6 per cent below the record acreage of 48,730,000 planted in 1926. This estimate, coming at a time when cotton and other farm crops are selling at a low price, is discouraging. It all depends now upon the weather conditions as to what may be the out-turn of the present cotton crop, since the acreage reduction is not enough to hold the production down to a point which would contribute to any material increase in price to the cotton farmer.

The cotton movement from August 1, 1929, to July 4, 1930, brought into sight more than 14,680,000 bales of cotton, according to the Department of Commerce.

### \$46,000,000 DEVELOPMENT

#### Important Construction Projects Under Way in Lower Rio Grande Valley

Harlingen, Tex.—According to a recent survey, development work under way or planned for the lower Rio Grande Valley will entail an expenditure of \$46,846,000. Irrigation work forms the biggest item in point of cost, representing an expenditure of \$28,115,000, while general construction is estimated to cost \$7,253,000. Navigation projects are estimated to cost \$6,658,000 and highway construction about \$4,825,000. Irrigation work under way or planned for Hidalgo County is estimated to cost \$14,666,000 and for Cameron County about \$5,950,000, while the largest single project is that of Willacy County Irrigation District No. 1, which will cost \$7,500,000 and irrigate 129,000 acres. The second largest project is that of Hidalgo County District No. 12, to cost \$5,000,000 and irrigate 90,000 acres, and the third largest is that of the Pharr-San Juan District to cost \$3,500,000.

Highway projects in Willacy County will cost about \$1,175,000 and similar projects in Cameron County about \$2,650,000, the latter involving the expenditure \$2,000,000 left of a previous bond issue; a proposed bond issue of \$400,000 and \$258,000 of state funds for the Point Isabel road. Hidalgo County's road building program calls for the expenditure of about \$1,000,000 as a part of an \$11,000,000 road building program inaugurated a little more than a year ago. A navigation program for the Valley will be carried out with the following funds: United States appropriation, \$2,158,000; Brownsville, \$3,500,000; San Benito-Point Isabel, \$500,000, and Harlingen, \$500,000. Improvements will cover the dredging of a channel through the pass at Brazos Santiago to Point Isabel; a channel to Brownsville, and a channel to Harlingen.

Important construction projects include a \$200,000 airport for Harlingen; Reese-Wil-Mond hotel addition; \$300,000 plant for the Valley Baking Company; \$200,000 cold storage plant for the Central Power and Light Co.; \$100,000 filtration plant and other Harlingen projects, while important items in Brownsville include a \$350,000 federal building; \$150,000 filtration plant, \$100,000 plant for the Texas Citrus Fruit Growers Exchange, \$45,000 jail addition, \$50,000 telephone building, \$30,000 Christian church and other structures. San Benito construction includes a \$350,000 school building program, \$45,000 Presbyterian church, \$65,000 Methodist church and other buildings, and that of Mercedes, a \$250,000 school building program and other projects.

## Some Major Projects of the Week

*Under the Construction Department elsewhere in this issue will be found a complete list of the week's activity in the South and Southwest, including hundreds of industrial, mining, power, transportation, building construction, and financial projects. It presents a panorama of development requiring materials, equipment and machinery of almost every description.*

### \$10,000,000 BALTIMORE STEAMSHIP LINE

**Baltimore & Ohio and Pennsylvania Railroads Interested in New Enterprise—Will Expend \$5,000,000 to Reconstruct Docks**

Organization of the Baltimore Mail Steamship Company to open a direct service between the ports of Baltimore and Hamburg via Norfolk, is regarded as a long step forward in the development of the port of Baltimore. The new company, to be capitalized at \$10,000,000, will bring the Baltimore & Ohio and Pennsylvania railroads together in co-operative efforts to develop the business of the port, inasmuch as officials of both roads will be connected with the organization, whose officers will include: Donald Symington, president of the Baltimore Trust Co., president; John M. Franklin, of the Roosevelt Steamship Co., New York, executive vice-president; Kermit Roosevelt, president of the Roosevelt Steamship Co., and Henry E. Treide, Baltimore, vice-presidents, and Iredell W. Iglehart, Baltimore Trust Co., treasurer.

Pennsylvania railroad interests are represented on the board of directors by A. J. County, vice-president of the railroad; Henry H. Lee, president of the Pennroad Corporation, a holding company for the railroad, and George H. Pabst, Jr., treasurer of the railroad company. Other directors are George M. Shriver, senior vice-president of the Baltimore & Ohio; T. Edward Hambleton, of Hambleton & Co., Baltimore; W. Frank Roberts, chairman of the board of the Standard Gas Equipment Corp., Baltimore; Mr. Symington, Mr. Roosevelt and Mr. Franklin.

The new line will use the Canton Company's piers at Baltimore, which were purchased last year by the Pennroad Corporation, and will expend about \$5,000,000, it is said, to reconstruct and re-equip them for handling passengers, mail and freight. The United States Shipping Board has authorized loans to the company aggregating \$6,540,000 for rebuilding five ships the company has taken over from the board, the loans representing approximately three-fourths of the cost of the work. Contracts for rebuilding the ships have been awarded to the Federal Shipbuilding and Dry Dock Company, Kearney, N. J., on a bid of \$1,674,000 for each vessel. When

ready for service the ships will be approximately 487 feet long, with a 56-foot beam and draft of 24 feet. In accord with the terms of a mail contract awarded the Roosevelt Steamship Company, under which the Baltimore Mail Steamship Company will operate, two new 18-knot vessels of 12,000 tons, to cost \$7,000,000 each, must be added to the line within five years. A weekly service will be maintained and vessels of the new line will have cabins for 87 passengers.

### 1100-MILE PIPE LINE

Tulsa, Okla.—Investigations are being made, it is said, by the Gypsy Oil and Gulf Pipeline Co. of this city, with a view to securing right-of-way for a pipe line to extend from Tulsa to Pittsburgh, Pa., a distance of approximately 1100 miles. Such a line would be designed to carry crude oil, it is said, from the Oklahoma and Texas fields to industrial and population centers of the eastern-central section of the country.

The Ajax Pipe Line Co., Springfield, Mo., recently awarded contract to the Oklahoma Contracting Co., Dallas, Tex., for two 10-inch welded lines from Glen Pool, Okla., to Wood River, Ill., a distance of about 400 miles. Nine pumping stations will be constructed on the route of the line, 45 miles apart.

### \$2,074,000 Contract for Government Building

Washington, D. C.—General contract to erect the new \$3,000,000 building for the Department of Agriculture has been awarded by the Treasury Department, Jas. A. Wetmore, Acting Supervising Architect, to the Nelson-Pedley Construction Co., Philadelphia, Pa., at \$2,074,000. The new building will cover a block bounded by Thirteenth street, Linwood place, B and C streets, southwest, and will be the first structure of the "extensible" program which has been approved. Other buildings of the same general type of architecture will be erected to the south of it and on both sides. The 6-story building will contain 86,000 square feet of floor space. Contract for elevators was awarded to the Gurney Elevator Co., New York, at \$156,975, and to the Cranford Co., Washington, for demolishing buildings.

### Urge \$52,000,000 Channel

Fort Worth, Tex.—The executive committee of the Trinity River Navigation Association, which is promoting a \$52,000,000 navigation project on the Trinity River to cover approximately 600 miles, has selected Roy Miller of Corpus Christi, Tex., as executive vice-president and adviser of the Association and has laid definite plans for pushing the project. Mr. Miller has suggested that the association form its promotional organization on a 5-year basis with an operating budget of \$300,000, and is of the opinion that the government would authorize a 9-foot channel if the association can secure the proper public support of the project.

### \$2,000,000 in New Construction at Ashland, Ky.

Ashland, Ky.—Construction activities in Ashland and vicinity during the late summer and fall will represent an outlay of more than \$2,000,000, according to local estimates. Major items definitely assured include a \$1,200,000 bridge across the Ohio River for which contract is expected to be awarded soon; surfacing Mayo Trail from the Boyd County line to Louisa, at a cost of \$400,000, on which work has already started; construction of a \$250,000 theater in Ashland, addition to King's Daughters' Hospital, Salvation Army citadel, school building, alterations to First Presbyterian Church and a school addition nearly completed. There is also much construction under way at the plant of the American Rolling Mill Company.

### Contract for \$2,500,000 Union Station

Oklahoma City, Okla.—General contract to erect a \$2,500,000 union station here for the St. Louis-San Francisco Railway Company, J. M. Kurn, president, St. Louis, and the Chicago, Rock Island and Pacific Railway Company, J. E. Gorman, president, Chicago, has been awarded to the Tankersley Construction Co., Oklahoma City. Construction of the station buildings will be handled by the Frisco, while the construction of subways will be taken care of by the Rock Island Lines.



## New St. Louis School Building

As typical of the modern school buildings being erected in St. Louis, the new structure recently completed at University City at a cost of approximately \$550,000 is a striking example. It is three stories and basement, of brick and reinforced concrete, and will be equipped adequately to meet the needs of the section it serves. Ferrand & Fitch were

the architects; Trueblood & Graf, associate architects, and the Martin Engineering Company, structural engineer, all of St. Louis. General contract was handled by the Murch Brothers Construction Company and reinforcing steel furnished by the Laclede Steel Company, both of St. Louis. Plumbing fixtures were furnished by the Crane Company, St. Louis.



University City High School, St. Louis, Missouri

### SOON START \$5,000,000 WAREHOUSE

#### Part of \$15,000,000 Railroad Project

St. Louis, Mo.—As soon as the site is cleared for a \$5,000,000 terminal warehouse to be erected here by the Illinois Terminal Railroad System, work will begin on the foundation for the structure, which will occupy the block bounded by Lucas avenue, High, Morgan and Twelfth streets. The building will be 20 stories, with two 12-story wings, and will contain about 1,000,000 square feet of floor space. A tower of 20,000 square feet of floor space will be used for offices. The warehouse terminal is a part of a \$15,000,000 project for building an elevated-surface subway line. Excavation for the subway from Cass avenue to Washington avenue will be started soon, according to A. P. Titus, vice-president of the railroad. It is planned to dig south of O'Fallon street under the O'Fallon street sewer to allow the subway to proceed, and it is also planned to run electric trains over an elevated-surface subway line from the western end of the McKinley bridge to the passenger terminus at Twelfth street and Washington avenue. Tracks will be elevated from the bridge to Eleventh and Howard street, where they will reach grade. The route of the subway will be down the center of High street, which is to be widened to 100 feet, and beneath the warehouse there will be six

tracks, each with a capacity of 15 cars. Elevators will facilitate loading, storing and transferring freight. A covered loading platform will be provided on one side of the building. Six tracks will branch out of the main subway and

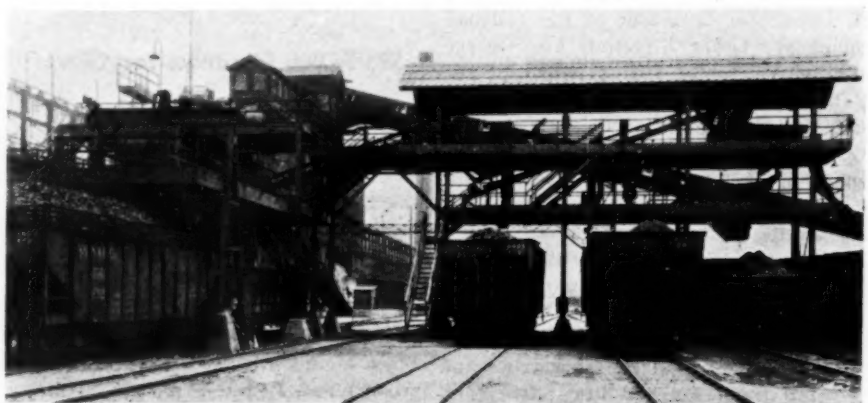
enter the warehouse from the north, while passenger trains will continue south under High street to Washington avenue and enter the passenger depot in the basement of the Carleton Building. Mauran, Russell & Crowell, St. Louis, are architects for the warehouse.

### AMERICAN SHIPYARDS INCREASE ACTIVITIES

#### Southern Yard Building 92,000 Tons

Washington, D. C.—Construction of five steel ships of a total tonnage of 92,600 by the Newport News Shipbuilding & Dry Dock Co., Newport News, Va., features the work now under way or under contract in American shipyards. According to the Bureau of Navigation of the Department of Commerce, a total of 251 steel vessels aggregating more than 470,000 gross tons were building or under contract on June 1, as compared with 237 vessels of 357,158 gross tons on May 1. On the basis of steel and wood vessels of 100 gross tons or more, the tonnage is distributed among 29 shipbuilding companies, the largest steel quota going to the Sun Shipbuilding and Dry Dock Company, Chester, Pa., with 14 ships totaling 108,472 tons, and the largest wood quota going to the Brewer Drydock Co., Mariners Harbor, Staten Island, N. Y., with 12 ships. The Newport News company tonnage includes four ships of 21,900 gross tons each, out of the 92,600 total tonnage.

## Coke Screening Plant at Birmingham



The Sloss-Sheffield Steel & Iron Co., Birmingham, Ala., recently placed in operation a new coke screening and sizing plant, illustrated herewith, designed and built by the Semet-Solvay Engineering Corp., New York. The plant embodies the newest developments in the preparation of coke. Latest designs and most convenient arrangement for operation have been incorporated in the assembly of conveyors, screens, crushers, loading devices, electrical equipment and track layout. Coke for industrial and domestic uses, from the largest sizes to "breeze," can be handled rapidly. Six cars can be filled simultaneously with various grades of coke.



# IRON, STEEL AND METAL MARKET

## Line Pipe Production Strong

Pittsburgh, July 14—[Special.]—Production of Bessemer and open-hearth steel ingots in June is reported at 3,440,239 gross tons, representing 68.73 per cent of capacity, and is somewhat more than the current estimates during the month. The average daily rate was 137,610 tons, which was 8 per cent under May and 19 per cent under the previous high of the year, in February. The decline was seasonal and hardly can be called unusually large, for in three of the last six years June was more under the preceding peak than is the case this year.

It seems beyond question that there is a further decrease this month. In 1919, July was above June, but that was an exceptional year, recovering from the shock of the war ending, and since then only 1928 showed heavier July than June production. There are some predictions of an early increase, but they are not numerous or strong. Perhaps, that in itself is favorable, as sometimes extreme pessimism is "one of the most encouraging signs."

Steel production last week was at about 60 per cent of capacity and that seems to be a fair guess for July as a whole. Substantial increases could occur thereafter without the rate earlier in the year being regained; but, that would be natural, since it is the regular thing for steel production to average somewhat lighter in the second half of a year. The Steel Corporation's unfilled obligations decreased 91,163 tons during June, against decreases of 200,000 to 300,000 tons in May and April. June decreases have been the regular thing, the only exceptions for many years occurring in 1927 and 1928. There has been scarcely any buying of standard rails in the last three months, while there have been heavy shipments to complete the annual orders placed late in the old year and early this year, shipments being lighter in June than in May or April. Probably, rails would approximately account for the unfilled tonnage decreases of the last three months. Prompt buying is the rule and the majority of orders stay on mill books as obligations for only a few days.

There is certainly no fresh bad news in steel. While production is off farther, that is merely in sequence to the decline in buying already known. No important steel consumer is likely to have lighter requirements in the next few months than at present, with the possible exception of the freight car shops, which are not really an important

consumer at present. The farm implement industry is in a lull and can have no change but an increase. Automobile production this month is very light, with many cars entirely out of production for a fortnight or longer. Line pipe is being produced at capacity, with much business on books and more in the offing, while there was very little production early in the year and not a great deal in the half year. Fabricated structural work is doing very well—as well as early in the year and nearly as well as last year, when it was exceptionally active.

The market in bars, shapes and plates was very poorly defined for a long time, but is now somewhat clearer. There were certain prices, but they applied only on small lots, attractive orders going at various irregular cuts. Now, on moderate sized lots down to single carloads, bars are quotable at 1.65 cents to 1.75 cents and plates and shapes 1.65 cents to 1.70 cents. Quoting the market thus represents a decline, on paper, but as a matter of fact the market seems steadier. Very large lots, of course, go at concessions when a construction job is involved. Other finished steel products are not quotably changed, but the market has little test, buying being in such small lots. A weighted average of all important finished steel products shows the market now to be about \$3 a ton under the low of late 1927, the lowest since 1922, and \$5 to \$6 a ton under last year's high. Steel prices are about 33 per cent above their 1913 average.

## Demand for Metals Is Quiet

New York, July 14—[Special.]—In three instances, metals which had staged some sort of a price recovery late in June and early this month, slipped back to former record low levels and then below them. Thus, copper declined to 11½ cents per pound, zinc dropped to 4.05 cents, after having improved to 4.17½ cents, and tin dropped to 29½ cents, after having sold at 31 cents quite recently. Demand for the metals continues quiet. What purchasing has been done has been because of the realization that prices were at bargain levels and not because of any immediate need. Antimony has dropped to a new low level for the movement, to 6¼ cents per pound, duty paid, from 7 cents.

The June statistics which have come out so far have not been encouraging. Surplus stocks of zinc increased nearly 7000 tons to over 109,000 tons, the largest reserve in the history of the indus-

try. The gain of nearly 3000 tons in the world's visible tin supply to over 42,000 tons has been mentioned. Copper statistics are expected, at the time this is written, to show an increase in surplus stocks.

The steel industry plods along at a slower pace than is customary for this time of year, with only two or three lines of brisk demand. Operations range from 25 per cent of capacity for the rail mills to full capacity for the pipe makers, with 56 per cent a general average. The automobile industry is consuming steel and non-ferrous metals sparingly. The Ford Motor Co. shut down plants from July 11 to 18. Demand for building steel has declined sharply, though this is probably a temporary condition since many projects are still in sight. Tin consumption in canning holds up well and is inclined to expand from to year. More varieties of edibles are being canned, one of the latest foods to be put up being new potatoes.

Sales of copper so far this month at the 11½ cents price total about 40,000 tons. Most of this purchasing was done on the belief that a 11½ cents figure will be rare in the months to come and purchases are a good investment. Some producers have reported that copper users with whom they had not come in contract for several years were knocking at their doors to buy at this figure. The recent export price was reduced to 11.80 cents. According to reports from abroad, European users are scheming to form a buyers' cartel to oppose the American selling cartel. They propose to buy copper elsewhere than from the United States, wherever possible, such as from Japan, but these plans are not taken seriously here, since the world must come to the United States for the red metal.

The day of greatest weakness in the metals as a class was on July 10. At the first session of the London Metal Exchange, tin dropped an average of £3 10 shillings, the sharpest change for a day in several weeks, though recovered £1 10s at the second session. On this day, too, the domestic producers, large and small, who had been holding to 12 cents per pound, came down to 11½ cents and reduced the export price the next day. Therefore, two metals have attained new lows since 1921 or 1922 in the past week, copper and tin, the latter having sold as low as 29½ cents per pound, which compares with 28¾ cents as the low point of 1922. It is also probable that zinc sold at a new low, probably at 4.05 cents, which is a new bottom level.

Current statistics on tin continue unfavorable, with supplies ever on the increase. However, if the present curtailment program is carried out seriously, the situation will be practically corrected by the end of the year. The dipping of tin prices to new low levels probably represents the opinion that the ambitious tin curtailment program will not be fulfilled completely, any more than was the tapping holiday in rubber during May. Tin and rubber have much in common, being produced largely in the same sections of the world.

Lead has been inconspicuous, because of its lack of development. Prices have been unchanged and business has been routine, carload lots and for July shipment.

### Steel Companies Expanding

Birmingham, Ala., July 14—[Special.]—Sales of pig iron continue in small lots, but the foundry iron finds an aggregate near, if not equal, to the production. Output of all kinds of pig iron is at low ebb, 14 blast furnaces being in operation. Production figures have shown reduction. Melters of foundry iron report new business coming in slowly, on the whole, but orders on books are being worked on. The backlogs will shortly be of the past. In the meantime, there is steady shipment of various products. Home base price of pig iron is \$14, No. 2 foundry. No concession is anticipated on this here and there has not been a deep cut, even into the competitive sections. A little tonnage is still being shipped into the middle West and along the Atlantic coast, the total not very large.

Cast iron pressure pipe shops are still producing pipe and in some instances are operating five days a week. The new lettings are slow and tonnage light. Foundries still report some castings being made, while machine shops are using a little pig iron. Stove foundries are doing fairly well and one or two soil pipe shops are making some pipe, the Central Foundry Company recently starting up a few floors in the manufacture of pipe.

The steel ingot production is low, while finishing mills operations now estimated at around 60 per cent capacity. Gulf States Steel Company is pushing construction of its sheet mill at Gadsden, with expectation of operation on or before August 1. This will complete the major development program of this company for 1929-30, blooming mill, plate mill and sheet mill being included. Progress is also noted on the development by the Tennessee Coal, Iron & Railroad Company, especially at the sheet mill at Fairfield. Structural steel will be fabricated nearby, steel to be produced by the T. C. I. itself.

Coal mining business continues quiet, though some of the larger corporations are moving their product on usual contracts. Expectations are a little brighter for early fall, despite the strong competition that is being experienced in oil, hydro-electric power and natural gas. Two of these commodities have taken a swing at the coal industry in the past few years and natural gas has come in during the past three months. Improvements are being made at coal mines throughout the district and lower costs of production and cleanliness being brought about. Gulf States Steel Co. is erecting a new coal washer and bath-houses for employees at its Sayre mines, expending around \$150,000, the washer to have a daily capacity of 1600 tons. This company is also sinking a 600-foot deep airshaft at its Virginia coal mines and is also aiding to its operations of the Shannon ore mines. DeBardeleben Coal Corporation is shipping coal to Tampa, Fla., for the Portland cement plant there.

Scrap iron and steel market continues slow and prices low. Heavy melting steel is to be had under \$12, with one of the steady melters buying a general run of the product delivered at \$10.75 to \$11. Dealers are able to find plenty of old material and are able to fill orders with ease.

Maj. Gen. T. Q. Ashburn, executive of the Inland Waterways Corporation, states that the operations of the 14 barge service by the Government will prove successful, as operated on the Mississippi-Warrior Rivers. From 1925 to 1929, inclusive, the income of this barge service was \$29,314,009.48 and disbursements or operating expenses, \$28,904,547.55; net income, \$409,461.93 or \$81,892.39 per year. The barge service will be disposed of when proper interests appear, which will operate for the best service of the people.

Quotations of pig iron and iron and steel scrap in the Birmingham district are as follows:

#### PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$14.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$14.50; iron of 2.75 to 3.25 per cent silicon, \$15.00; iron of 3.25 to 3.75 per cent silicon, \$15.50.

#### OLD MATERIAL.

Old steel axles .....	\$19.00 to \$20.00
Old iron axles .....	17.00 to 18.00
Old steel rails .....	11.00 to 13.00
Heavy melting steel .....	10.75 to 12.00
No. 1 cast .....	12.00 to 13.00
Stove plate .....	10.00 to 11.00
No. 1 railroad wrought .....	10.50 to 10.50
Old car wheels .....	10.00 to 11.00
Old tramcar wheels .....	11.00 to 11.50
Machine shop turnings .....	7.50 to 8.50
Cast-iron borings .....	7.50 to 8.50
Cast-iron borings (chem.) .....	12.00 to 13.00
Rerolling rails .....	12.00 to 13.00

The State Bond Commission, Jackson, Miss., receives bids August 1 to purchase \$850,000 of bonds to bear an interest rate not exceeding 5½ per cent.

### \$8,240,000 Authorized for Supreme Court Building

Washington, D. C.—A resolution has been passed by the House of Representatives authorizing David Lynn, architect of the Capitol, to enter into contracts involving as much as \$8,240,000 for construction of the new Supreme Court Building on the blocks bounded by East Capitol street, Maryland avenue, First and Second streets. The building will be 385 by 304 feet, of Corinthian design, the central section to be 4 stories above the east front terrace, 3 stories on the west front and the remainder of the structure lower. The Supreme Court room will be 64 feet square and about 30 feet high. Other facilities will include public and private corridors, elevators, law libraries on the second and third floors, inclined driveways to the basement, auto storage space and a ventilation system. The work of clearing the site is expected to be completed within three months, after which contracts will be awarded for excavation and foundations. In the meantime plans for the building are expected to be completed. Funds to the amount of \$1,500,000 have been appropriated for initial construction. Cass Gilbert, New York, is the architect and construction will be under the supervision of Mr. Lynn, while building details will be handled by the United States Supreme Court Building Commission, of which Chief Justice Hughes is the chairman.

### \$1,000,000 Railroad Bridge

Amarillo, Tex.—The Atchison, Topeka and Santa Fe Railway Company, G. W. Harris, chief engineer, Chicago, awarded contract to the Union Bridge & Construction Co., Kansas City, Mo., for the substructure of a \$1,000,000 bridge across the Canadian River, 19 miles north of Amarillo, on the new Amarillo-Boise City line now under construction. The bridge will be 1736 feet long, 114 feet above the river. It will involve 17 piers, ten of which will be sunk by pneumatic process and seven open piers founded on rock. They will contain about 12,000 cubic yards of concrete.

### \$307,659,548 Railway Income

Washington, D. C.—According to the Bureau of Railway Economics, class 1 railroads in the first five months of 1930 had a net railway operating income of \$307,659,548, as against \$457,017,242 for the first five months of 1929. Figures for the five months of 1930 show an annual return of 3.68 per cent on property investment, as compared with a rate of 5.58 per cent for the corresponding period in 1929.



# AVIATION, AIRPORTS AND AIRWAYS

## Shreveport's \$8,000,000 Air Project

Barksdale Field, the proposed \$8,000,000 home of the Third Attack Wing of the United States Army Air Corps near Shreveport, La., will be under construction by January 1, 1931, according to expectations. Title work is now virtually completed in connection with acquisition of the 22,000-acre site, which was purchased with the proceeds of a \$1,500,000 municipal bond issue and donated to the Federal Government in 1929 by the City of Shreveport.

The field site lies directly across the Red River and about three and a half miles from Shreveport. Forefront of the location, which is eight miles wide and four and a half miles deep, has been chosen as a landing field and building area to accommodate the 3500 people who will compose the field community, while the major part of the land will be utilized as a bombing area. Sandy loam composition of the soil on the tract will make excellent turf, as well as providing natural drainage. In addition to a paved highway leading directly to the tract, the rails of the Vicksburg, Shreveport and Pacific and the Illinois Central railroads afford abundant transportation facilities.

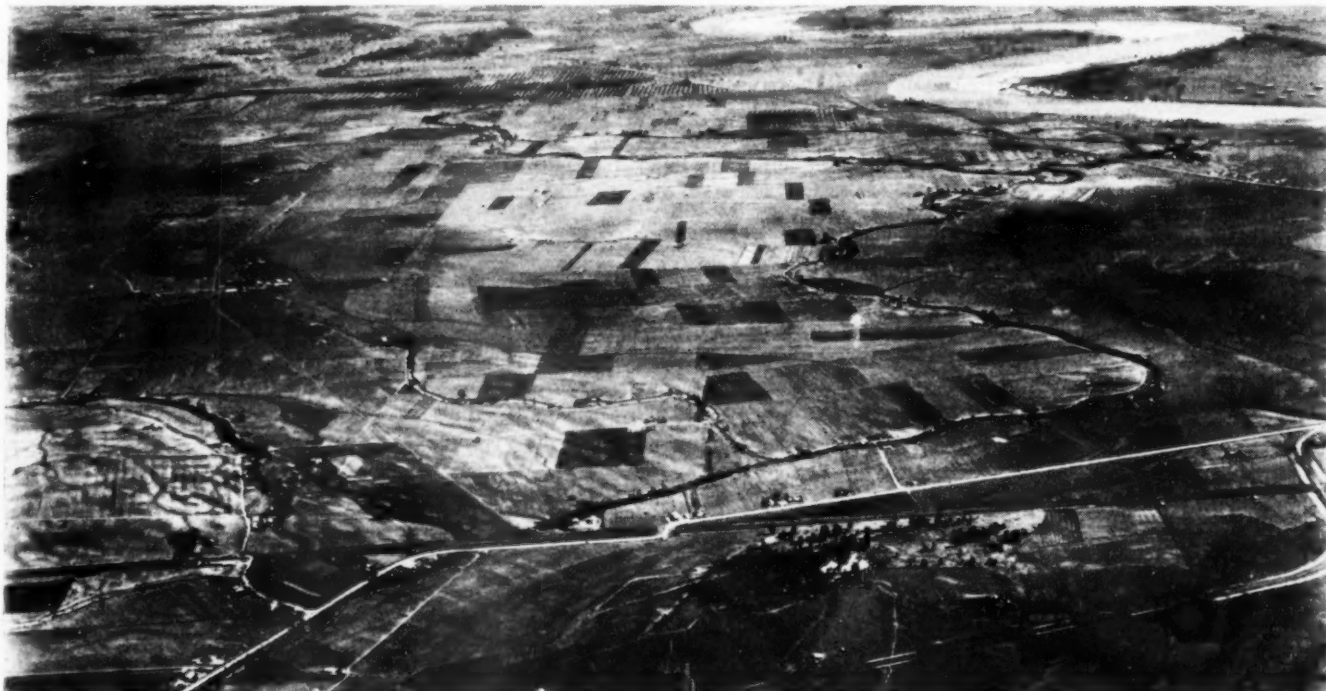
About \$6,500,000 will be expended by the Government for necessary housing accommodations, including hospital, gymnasium, theatre, chapel, post exchange, garage, storage, warehouses and utility shops. An additional \$1,100,000 will be represented in the technical construction such as hangars, headquarters and operations, machine shop, assembly, photographic, parachute, and armament buildings and air corps warehouses.

Under the Air Corps' five year expansion program provision has been made for a bombardment unit on the West coast, another on the East coast, a pursuit group on the northern border, and an attack wing on the southern border of the United States. Barksdale Field, when completed, is to be the headquarters of the latter. It will be one of the largest units of the Air Corps and when fully organized will have 196 officers, four warrant officers, and 1303 enlisted men. This personnel will maintain and operate 50 pursuit, 52 attack, six observation and two cargo airplanes. At present the only organized unit of the Wing is the Third Attack Group quartered at Fort Crockett, Galveston, which is to be moved to Shreveport on completion of the new post.

The site contains the finest natural

airdrome ever seen by the board, according to one of its members. It contains over 3000 acres of landing area, exclusive of the portion to be devoted to buildings, and is three miles in the direction of the prevailing winds and over one and a half miles thereto in front of the hangar line, with over a mile on either end of this line available for landings. The bombing, gunnery and maneuver areas, containing more than 20,000 acres, will permit formations loaded with live bombs to take off from the airdrome, proceed to their objective and drop bombs without leaving the reservation, thus insuring safety to the civilian population.

In addition to this huge Federal undertaking, two commercial aviation companies, each with its own airfield, now operate out of Shreveport, and air passenger lines from the north and south cross at Shreveport with one flying eastward and westward. A first class municipal airport, financed by a bond issue other than the \$1,500,000 bonds issued to purchase the site for Barksdale Field, is also in the process of being established. Bids are being received by the local commission council for construction of this airport's various buildings, including a \$40,000 administration building, a \$20,000 hangar, electrical installations to cost \$14,000 and \$4500 worth of concrete work.



By Fairchild Aerial Survey, Inc., Dallas, Texas

View of Site for \$8,000,000 Home of Third Attack Wing of Army Air Corps Near Shreveport

Red River in the background, one of the tributaries of the Mississippi for which the Federal Government has appropriated funds for flood control work.



## NEW AND IMPROVED EQUIPMENT

### Leaning Wheel Grader

A new grader to team up with the Caterpillar 60 tractor, featuring a 42-inch lateral side shift of blade that can cut a bank of 60 degree slope, is announced by the Caterpillar Tractor Co., San Leandro, Cal. This is the Caterpillar 60 leaning wheel grader, the fifteenth machine in a line of Caterpillar graders, maintainers, elevating graders and planers for road construction. It weighs 11,300 pounds without scarifier,

is introduced for the knuckle arms of the leaning wheels. Features of the machine are a 3-point control, to hold correct blade pitch advantage; bank cutting blade, which cuts at an angle of 60 degrees with a high reach of 6 feet, 6 inches; compensating spring lift, so mounted as to equalize tension on both ends of blade and exert uniform lifting force at any elevation of blade, protected by safety cables; all housed gears machine-cut steel worm mounted on greater reach; centralized adjustment controls; bronze lift gears, adjustable

the front to the rear of the tank. Draft doors are so placed that temperature of the upper part of the tank can be reduced as material is discharged. The entire exposed surface of the tank and heating chambers are covered with 1-inch magnesla block, one-half inch layer of magnesla cement and a coat of magnesla and Portland cement, over which is placed a jacket of No. 22 gauge galvanized sheet steel. Two 25-gallon tanks with hand air pump, gauges and valves are used for fuel, the supply tank being connected directly to the burners, with the second in reserve.



A Powerful Grader, the Caterpillar Sixty

and introduces a centralized control system by which seven control wheels govern nine adjustments of blade pitch and position, wheel adjustment and steering.

The lifting mechanism is mounted on roller bearings and a new construction

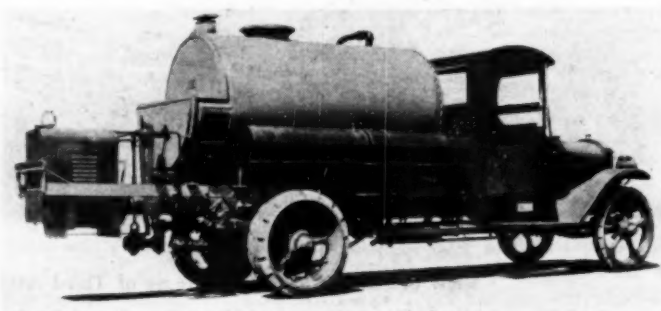
to six points of wear, running against machine-cut steel worm mounted on roller bearings; steel wheels with cast-in hub spokes; direct draft to blade, and axle spindles drop forged, heat treated, of chrome-nickel steel.

### Distributor for Road Materials

The Jos. Honhorst Co., Cincinnati, Ohio, manufacturers of contractors' and municipal equipment, have introduced a distributor for applying oil, tar, asphalt and other bituminous road binders for light or deep penetration. Valves and pumps are completely enclosed in a heated chamber and cannot clog with cold material, it is stated. Two 6-inch torch type kerosene burners heat material rapidly and maintain a uniform temperature, while a Viking rotary pump driven by a 16-horsepower Novo gas engine delivers a heavy spray under pressure. The pump also transfers material from the tank car to the distributor. The tank is of 600- or 800-gallon capacity, with all seams elec-

trically welded and a manhole on top with a 6-inch filling cap in the cover. There is a heating chamber on each end of the tank while two 6-inch heating tubes extend from the front through the body of the tank and return, and eight 3-inch tubes above them extend from

Honhorst  
Distributor  
for  
Applying  
Oil,  
Tar  
and  
Other  
Road  
Binders



### TEC Heavy Duty Crane

The Terminal Engineering Company, Inc., New York, recently put on the market a new type of heavy duty crane suitable for indoor or outdoor work, with a capacity of 3350 pounds at a distance of two feet from the end of the chassis, or 750 pounds at a distance of fourteen feet from the end of the chassis. The boom, which is telescopic over a distance of 6 feet, and the hook are operated independently from two separately driven hoist units, each with its own motor and controller. A four-wheel drive with no mechanical differentials, but with a motor on each wheel, gives maximum traction, while the machine is so designed as to concentrate as much weight as possible over the wheels and away from the load, in order to effect the maximum counterbalancing. The greatest height of the lift is 17 feet, 6 inches on the standard model, although longer booms may be furnished when desired. Power is supplied to the crane from a storage battery large enough to operate an electric magnet, as well as to supply propelling and hoisting force. The battery is carried in one unit in a steel container and may be changed easily by the use of an overhead hoist. The crane may be of particular use in railway round houses, large machine shops, factories, factory yards and on steamship piers.

# CONSTRUCTION DEPARTMENT

## and NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Construction Bulletin of the Manufacturers Record gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

### Airports, Airplane Plants, Etc.

Ark., Marianna — Chamber of Commerce, Elgan C. Robertson, Pres., has preliminary plans complete for \$25,000 airport, including swimming pool, tennis grounds and tourist camp.

D. C., Washington — Dept. of Commerce, Airways Div., started constructing radio range beacon, Hunter's Point, site of airport; starting "flying weather" station on Potomac River, 3 mi. below District line.

La., Natchitoches — City soon call for bids for 3 bldgs. on 205-acre tract recently acquired for municipal airport and parish fair grounds; hangar, brick, steel, to be erected first; erect 2 frame buildings, each 60x100 ft. on fair ground; \$25,000; construction under direction of Raymond Breazeale, Natchitoches. 5-1

La., Shreveport — City Council, L. E. Thomas, Mayor, opens new bids July 22 for airport bldgs.; following estimating on general contract: Gilman McConnell, Ricou-Brewster Bldg.; W. Murray Werner, Commercial Bank Bldg.; Welch & McLain, 940 Elmwood St.; K. C. Wilson, Slattery Bldg.; Central Contracting Co.; McMichael Construction Co., City Bang Bldg.; Ward Belote and Ashton Glassell, 260 Cadillac St., all Shreveport; Quisile and Andrews, 2212 W. Seventh St., Fort Worth, Tex.; bids to be taken on individual items and group project; bldgs. consist of administration bldg., hangar, lighting system, beacon, wire fencing, curbs, walks, aprons, conc. work, etc.; Jones, Roessle, Olschner & Weiner, Architects, Ardus Bldg.; Airports Engineering & Construction Corp., Div. of Southern Air Transport, Inc., Fort Worth Natl. Bank Bldg., Fort Worth, Tex., Designing Archt. 7-3

N. C., Greensboro — Henry W. Rafus leased and will operate municipal airport.

Tenn., Knoxville — Knoxville Air Service, Inc., chartered; Ben H. Testerman, 2012 Lake Ave.

W. Va., Kingswood — Kingswood Air Transport, Inc., capital \$20,000, chartered; T. A. Wilson, J. T. Spahr; establish airport and flying school in Preston County.

### Bridges, Culverts and Viaducts

#### Proposed Construction

Ala., Birmingham — City, A. Johnston Hawkins, Engr., probably begin work about October on 18th and 20th Street underpasses upon completion of 14th Street underpass.

Arkansas — Arkansas State Highway Comsn., Dwight H. Blackwood, Chmn., Little Rock, receives bids July 19 for 7 bridge projects: Carroll County—402 lin. ft. rein. conc. bridge over Kings River, Berryville-Eureka Springs rd.; White Co.—382 lin. ft. struc. steel and rein. conc. bridges over Bull Bayou and relief openings, Beebe-Higginson Rd.; Union Co.—224 lin. ft. treated timber and struc. steel bridges, El Dorado-Three Creeks Rd.; Yell Co.—282 lin. ft. treated timber and steel I-beam bridges, Plainview-Fourche Rd.; Clay Co.—601 lin. ft. treated timber pile bent and steel I-beam bridges, Rector-St. Francis rd.; Miller Co.—530 lin. ft. struc. steel and timber bridge over Sulphur River, Texarkana-Louisiana Line rd.; Washington Co.—140 lin. ft. ren. conc. deck girder bridges, Parks Corner-Oklahoma State Line rd.

D. C., Washington — Arlington Memorial Bridge Comsn., Navy Bldg., receives bids July 30 for constructing fenders for bascule draw span of Arlington Memorial Bridge; 10 tons rein. steel, 60,000 ft. b. m. struc. timber, 600 lin. ft. conc. piles, 10,700 lin. ft. wood piles, 100 cu. yds. rein. conc. 2-27

Fla., Pensacola — Escambia County Board of Commrs. approved final plans for Lillian Bridge; \$200,000; Winston E. Wheat, County Engr. 6-5

Ga., Appling — State Highway Dept., George C. Blount, Maintenance Engr., Atlanta, soon let contract for \$30,000 temporary bridge over Little River, connecting Columbia and Lincoln counties.

Kentucky — State Highway Comsn., Frankfort, plans bridges over Kentucky River at High Bridge, Gratz, and over Green River at Rockport; also ordered condemnation proceedings for right-of-way for bridge over Kentucky River at Tyrone.

Ky., Henderson — Indiana State Highway Comsn., Fred Kellam, Asst. Ch. Engr., in Charge of Structures, Indianapolis, Ind., has plans nearly complete for bridge over Ohio River to connect point four miles north of Henderson with Dade Park, Ind.; date of opening bids not yet determined; A. J. Wedeking, Chmn., Indiana Highway Comsn.; Kentucky's share of cost \$2,000,000.

Maryland — State Roads Comsn., Baltimore, received low bids: Contract M-77-33, Montgomery County, bridge over B & O R. R. tracks at Kensington, Ligon & Ligon, 3310 Ridgewood Ave., \$20,764; Cont. H-94-42, Harford County, steel superstructure for bridge from Level to Darlington, over Deer Creek, American Bridge Co., Continental Tr. Bldg., Baltimore, \$15,706; Cont. H-86-42, substructure for same, Forbes-Murphy Construction Co., 326 St. Paul St., Baltimore, \$17,872.

Md., Love Point — State Roads Comsn., G. Clinton Uhl, Chmn., Baltimore, receives bids July 22 for timber bridge, over Kent Island Narrows, exclusive of draw span, on Love Point-Queenstown Rd., Queen Anne's County; Cont. No. Q-43-28.

Md., Vienna — State Roads Comsn., Baltimore, let contract to W. C. Briddell Co., Inc., Drivers & Mechanics Natl. Bank Bldg., Baltimore, at \$199,400, to construct bridge over Nanticoke River, between Dorchester and Wilcomico Counties; pile, girder, rein. conc., 1013 ft. long.

Miss., Natchez — Adams County Board of Supervisors, W. E. Hale, Clk., rejected bids for reconstructing and two additions to bridge over St. Catherine Bayou, on Lower Natchez-Woodville Rd. 4-3

Mo., St. Louis — City, Bd. of Public Service, City Hall, receives bids July 29 for rein. conc. bridge to carry Lansdowne Ave. over River des Peres; Letting 4059.

N. C., Currituck — Wright Memorial Bridge Co., composed of L. C. Blades, W. G. Gaither and W. L. Jones, purchased rights and franchises to construct toll bridges across Currituck Sound between Currituck and Dare Counties from Kitty Hawk County. 8-15-29

S. C., Branchville — State Highway Dept., Columbia, plans bridge over Edisto River near Branchville.

South Carolina — State Highway Department, Ben M. Sawyer, Ch. Commr., Columbia, receives bids until July 29 for following: Federal Aid Proj. 17, Calhoun County — widening three bridges on Route 2 between Lexington County line and St. Matthews; State Proj. 574, Colleton County, rein. conc. struc. steel and treated timber bridge over Little Salkahatchie River on Route 64; F. A. Proj. 275-B York County, rein. conc. bridge over Rishing Creek on Route 21; St. Proj. 717, Saluda-Newberry counties, rein. conc. and struc. steel bridge over Saluda River on Route 19; St. Proj. 516, Saluda-Newberry Counties, rein. conc. and struc. steel bridge, Route 392, near Chappels; St. Proj. 696, Lancaster County, rein. conc. struc. steel and treated timber bridge, Route 97, between Great Falls and Liberty Hill; St. Proj. 714, Chesterfield County, rein. conc. bridges, Route 35, Page-land and McBee; F. A. Proj. 300, Orangeburg-Bamberg Counties, rein. conc. bridge, Edisto River on Route 78 near Branchville; F. A. Proj. 268-A, McCormick County, rein. conc. bridge over Rock Creek, Route 43; St. Proj. 722, Greenwood County, rein. conc. bridge over Southern Railway tracks near Hodgeson Route 24; St. Proj. 720, Chesterfield County, rein. conc. bridge over Thompson's Creek, Route 9 near Chesterfield; F. A. Proj. 195-D, Greenwood-Laurens Counties, rein. conc. bridge over Saluda River, Route 25 near Ware Shoals; F. A. Proj. 80 and 296, Williamsburg County, conc. bridge, Route 26 near Kingstree and three rein. conc. bridge on Route 26 between Kingstree and Andrews.

Tennessee — Department of Highways and Public Works, Nashville, receives bids July 18 for two bridge contracts: Fayette County — St. Aid Proj. 540-A, 5 timber bridges on 1 mi. St. Hwy. 76, between Moscow and Somerville; Grainger County — St. Aid Proj. 14-A, conc. bridge over Briar Fork creek, near Tate Springs, St. Hwy. 1.

Tenn., Knoxville — City, George R. Dempster, Mgr., probably have plans completed week of July 6 by Marsh Engineering Co., Des Moines, Iowa, for Henley Street Bridge; immediately thereafter plan advertising for bids and awarding contract in 30 days; 30,000 yd. conc. and 3,500,000 lbs. steel. 4-24

Tenn., Memphis — U. S. Engineer Office receives bids July 22 for constructing bridges, culverts and roads in connection with Bird's Point-New Madrid Floodway drainage system.

Tex., Amarillo — City, Wm. Durham, Mgr., plans beginning construction on North Amarillo underpass, upon completion of Third St. underpass; plans now in hands of officials Chicago, Rock Island & Pacific Ry., W. H. Peterson, Ch. Engr., Chicago, for approval. 6-5

Tex., Dallas — State Highway Comsn., R. S. Sterling, Chmn., Austin, probably take bids July 30 on Proj. 946-C; 257 mi. bridges on Scyene Rd., Hwy. No. 15-A.

Tex., Dallas — Dallas County, Charles E. Gross, Auditor, receives bids July 28 for dam and necessary bridges across Duck Creek on 3,500 ft. of Duckworth Rd., about 2 mi. east of New Hope.

Tex., Beaumont — Committee studying grade crossing elimination plan, James F. Weed, Chmn., soon report to City Comsn. on constructing underpasses on all streets crossing Southern Pacific tracks, except viaduct at



Mariposa St.; city share \$900,000 of cost, remainder of \$4,000,000 to be assumed by Southern Pacific Lines, R. W. Barnes, Ch. Engr., Houston.

Tex., Houston—City, J. M. Nagle, Engr., preparing plans for approach to proposed McKee Street Bridge.

Virginia—State Department of Highways, Richmond, has net low bid of \$10,761 from Cobb & Homewood, Inc., Chapel Hill, N. C., for bridge over Warwick Swamp, Sussex County; Route 52, Proj. S626B2.

Virginia—Department of Highways, Richmond, received following net bids: Proj. S554B1, at \$3109 for repairing fender system on bridge over Mattaponi River, West Point, Route 30, King William County; Proj. S626B2, at \$10,761 for bridge over Warwick Swamp, Route 52, Sussex County.

Virginia—Department of Highways, Richmond, receives bids July 22 for two bridges: Proj. F88, 77-ft. bridge over Potomac Run at Fredericksburg, Route 31, Stafford County; on July 29 for Proj. F191H, 487-ft. bridge over Pagan River, Route 10, Isle of Wight County.

Va., Lynchburg—J. R. Ford low bidder at \$21,925 for 320-ft. rein. conc. bridge near Virginia Episcopal School.

Va., Norfolk—City, W. H. Taylor, III, Director of Public Works, starting work on \$20,000 repairs to Camptella Bridge.

Va., Richmond—Regarding construction of \$950,000 Ninth St. Viaduct, R. Keith Compton, Director of Public Works, advises matter is pending in City Council, nothing definite as yet.

W. Va., Harpers Ferry—State Bridge Comsn., Charleston, considering State-owned bridge over Potomac River connecting Harpers Ferry with Maryland shore.

#### Contracts Awarded

Ark., Felsenthal—State Highway Dept., Little Rock, let contract to Gauger-Korsmo Construction Co., Fidelity Bk. Bldg., Memphis, Tenn., for bridge over Ouachita River; Decatur Iron & Steel Co., Decatur, Ala., have contract for 400 tons of steel.

D. C., Washington—District Comms., Engr. Dept., let contract to M. Cain Co., Inc., 3315 Eighth St., N. E., for reconstructing Kenilworth Ave. bridge over Watts Branch. 5-29

Ky., Louisville—Kentucky & Indiana Terminal Railroad Co., H. R. Kurrie, Pres., Transportation Bldg., Chicago, Ill., let contract for grade separation work to Henry Bickel Co., 435 Garden St., Louisville, at \$271,193; covers excavating, filling, conc. work, bridge and steel work in elevation of about 6,000 ft. of track between Market and Kentucky streets; W. S. Campbell, Mgr. and Ch. Engr., Louisville. 5-29

Ky., Sadieville—Southern Railway System, B. Herman, Ch. Engr., Construction Dept., Washington, D.C., let contract to Mt. Vernon Bridge Co., Mt. Vernon, Ohio, for 300 tons of steel for bridge over Eagle Creek, near Sadieville.

La., Bastrop—Morehouse Parish Police Jury, J. W. Brodnax, Pres., let contracts for 4 bridges; to J. W. McKeithen, Grayson, for 627-ft. Cory's Bluff Bridge, 4 mi. west of Bonita, and for 576-ft. Knox Ferry Bridge, 4 mi. west of Gallion; to J. A. Hanchey, Mittle, for 559-ft. Bonner's Ferry Bridge, 4 mi. northwest of Bastrop, and for 627-ft. Parker's Ferry Bridge, 3 mi. northwest of Bastrop; creosoted timber approaches, 100-ft. steel span through truss; 16-ft. roadway with creosoted timber floor joists; J. Lester White, Parish Engr. 7-10

Miss., Belzoni—Comms. of Main Separate Road Dist. of Supervisors, Dist. No. 4 of Humphreys County, let contract to A. E. Ungeretich at \$15,142 for waterway structures; A. R. Hutchens, Chancery Clk.

Miss., Columbus—Decatur Iron & Steel Co., Decatur, Ala., has contract for 115 tons of steel for Lowndes County bridge; Decatur Iron & Steel Co., Decatur, Ala., has contract for 115 tons of steel.

Miss., Senatobia—Tate County Bd. of Supvs., let contract to J. N. Fewell, Savage, for two steel bridges across Arkabutla Canal.

Mo., Kansas City—Kansas City Terminal Ry. Co., John V. Hanna, Ch. Engr., let substructure contract for \$325,000 Oak St. viaduct to J. W. McMurry Contracting Co., Rwy. Exch. Bldg., Kansas City; includes foundations and retaining walls; bridge to be 1200 ft. long, 58 ft. wide, brick paved roadway; 4900 cu. yds. rein. conc., 2000 cu. yd. earth and rock excavation, 383,000 lbs. rein. steel, 11,500 cu. yd. fill, 13,200 lin. ft. conc. pil-

ing; contracts yet to be let for struc. steel, rein. conc. deck, paving, curbing and sidewalks; Ash-Howard-Needles & Tammen, Const. Engrs., Orear-Leslie Bldg., Kansas City. 6-26

Mo., Kansas City—Missouri-Kansas-Texas R. R. Co., F. Ringer, Ch. Engr., St. Louis, let substructure contract for \$158,439 bridge over Missouri River and Missouri Pacific railroad to Kansas City Bridge Co., Orear-Leslie Bldg.; bridge to have conc. pneumatic piers and a 408-ft. vertical lift draw span; construction of approaches and superstructure not to be arranged for until 1931; R. M. Stubbs, Bridge Engr., 4027 Shaw St., St. Louis; War Dept. understood to have approved plans. 5-29

N. C., Elizabeth City—Atlantic Bridge Co. Jefferson Bldg., Greensboro, has contract for bridge over Pasquotank River, connecting Elizabeth City and Camden County; \$350,000. 4-17

Okla., Marietta—Gov. Dan W. Moody, of Texas, signed bill authorizing construction of bridge over Red River, connecting Marietta, and Gainesville, Texas; Missouri Valley Bridge & Iron Co., Leavenworth, Kansas, awarded contract last April.

Tex., Amarillo—Santa Fe System, G. W. Harris, Ch. Engr., Chicago, Ill., let contract, at cost plus fixed fee, to Union Bridge & Construction Co., 1205 Midland Bldg., Kansas City, Mo., for substructure of \$1,000,000 bridge over South Canadian River, 19 miles north of Amarillo; 1,736 ft. long, 114 ft. above river; sink 10 piers by pneumatic process; seven open piers founded on rock, all to contain 12,000 yds. of conc.

Tex., Houston—Harris County, C. R. Halle, Engr., let contract at \$38,518 to Don Hall, Union Natl. Bk. B'dg., for 577-ft. conc. bridge over Spring Creek, West Montgomery Rd. 7-10

Tex., Rogers—Alamo Iron Works, 130 Santa Clara St., San Antonio, have contract for 228 tons of steel for highway bridge, for which Thomas & Radcliffe, Rogers, are general contractors.

Va., Wythesville—R. H. H. Blackwell Construction Co., Kingsport, Tenn., has contract for bridge over New River, near Wythesville.

#### Canning and Packing Plants

Fla., Avon Park—Simmons & Gifford, Frostproof, has contract for packing plant for L. Maxey, Inc.; brick and steel; 160x120 ft.; daily capacity 6 cars oranges and 10 cars grapefruit; cost \$50,000; later plan erection additional building. 6-12

Fla., Dundee—Florida Gold Citrus Corp., Tampa, reported, closed contract for canning plant; capacity 150,000 cases.

Fla., Frostproof—Simmons & Gifford, reported, have contract for addition to citrus canning plant for Florida Fruit Cannery, Inc., 100x80 ft.; double present capacity; install additional machinery.

N. C., Windsor—C. P. Crockett, reported, interested in establishment canning plant.

#### Clayworking Plants

Md., Frostburg—North American Refractories Co., National City Bank Building, Cleveland, O., advises no improvements or changes to the recently acquired Savage Mountain Fire Brick Co. are under consideration at this time. 7-10

#### Coal Mines and Coke Ovens

Alabama—DeBardeleben Coal Corp., 2201 First Ave., Birmingham, expending \$100,000 installing practically new plant at Hull, No. 33 coal mines, Walker County; entrance to mine to be placed  $\frac{3}{4}$  mi. closer to Dora on main line of St. Louis-San Francisco Ry.; install new tipples, coal washer, side tracks, etc.; making improvements at other points. \$350,000 being expended for plant improvement at mines.

Alabama—Gulf States Steel Co., Brown-Marx Bldg., Birmingham, expending \$150,000 for coal washer and bath houses for employees at Sayre coal mines, Jefferson County, and improvements at Shannon ore mines; coal washer to have capacity of 1600 tons, superstructure fabricated steel furnished by Southern Steel Works Co., 908 Lucien Ave.; Charles Stewart Machine Co. installing 44 3-compartment Elmore jigs in washing machine.

Ky., Madisonville—Eastern Coal Corp. formed by merger of Johnson Coal Co. and Cardinal Mining Co.

#### Concrete and Cement Plants

Mo., St. Louis—St. Louis Portland Cement Co., recently organized, reported, erect \$2,000,000 cement plant, construction to start as soon as site is selected; to have capacity of 4000 bbl. and employ 150; construct 2 kilns, each 200 ft. long, 11 ft. in diam.; open large stone quarry and crusher for commercial operations; plant to serve several states within radius of approx. 300 mi. of city; officers include: C. Boeitcher, Pres., R. J. Morse, Secy. and Gen. Mgr., both Denver, Colo.; C. D. Nichols, Vice-Pres., 3900 N. McKinley St., Oklahoma City, Okla.; M. O. Matthews, Treas., Ada, Okla.

Mo., St. Louis—Marquette Cement Mfg. Co., Marquette Bldg., Chicago, Ill., R. W. Meyer, Local Representative, 1623 Arcade Bldg., receiving bids for 5 cement silos to supplement present storage and packing plant terminal, Mississippi River, foot Malt St.; to be completed before Nov. 1; \$75,000.

#### Cotton Compresses and Gins

Ark., Rector—J. L. Purcell, R. E. French and associates, reported, interested in organizing company to establish cotton compress.

Ga., Macon—Swift & Co., Carl M. Allen, Mgr., 300 Cherry St., started work on construction of conc. foundation of cotton gin on Waterville Rd.; 4 unit type with 80 saws to each roller; install modern equipment.

La., Monroe—Union Oil Mill, Inc., 520 Trenton St., reported, let contract to J. L. Humble Construction Co., both West Monroe, and Muskogee Iron Works, Frankfort and Spaulding St., Muskogee, Okla., for 2 story addition to plant; 90x220 ft.; cost \$55,000. 5-29

La., Tallulah—Union Compress & Warehouse Co., erect 25,000 bale capacity cotton compress.

La., West Monroe—Tensas Gin Co., Inc., capital, \$20,000, incorporated; C. W. Wallace, 400 Gland Drive, Monroe; Alfred Jenkins, West Monroe.

Okla., Strong City—Farmers Union Co.-Operative Gin, J. J. Wilson, Pres., Crawford, will construct cotton gin, capacity 50 bales daily; erect gin 26x86 ft., cotton house 26x40 ft., seed house, 24x30 ft.; install five 8-saw gin stands; Biggs & Co., 1401 Lamar St., Wichita Falls, and Murray Co., 3200 Williams St., Dallas, Meh. Contrs. 7-10

Okla., Tipton—Farmers' Co-Operative Gin Co., capital \$25,000, chartered; W. T. Hasley, A. S. Marteny.

Tex., Quanah—Texas Co-Operative Gin Co., capital \$50,000, chartered; W. W. Cole, T. M. Haney.

Tex., Rogers—Farmers Gin Co., capital \$32,000, chartered; W. W. and Ben Adams.

#### Drainage, Dredging and Irrigation

Ala., Mobile—U. S. Engr. Office opens bids Aug. 11 for dredging approx. 6,000,000 cu. yd. material in Mobile Bay Channel.

Ark., Pine Bluff—Jefferson County Sub Dist. No. 1 of Drainage Dist. No. 8, C. H. Triplett, Jr., L. L. Phillips and associates, Comms., has plans in progress for drainage work, including enlargement and new ditches containing approx. 420,000 cu. yd. in area of 20,000 acres; \$73,000; Baxter Engineering Co., Engr., Donaghey Bldg.

Florida—Rivers and Harbors Act, signed by President, provides \$7,000,000 for flood control and waterway projects in Lake Okechobee Dist., including \$748,000 for maintenance and elimination of curves in ship channel from docks to Egmont Bar, Tampa; State and local interests to appropriate \$2,000,000.

Fla., Cedar Keys—U. S. Engr. Office, Jacksonville, opens bids Aug. 9 for dredging approx. 15,300 cu. yd. material in main channel of approach to Cedar Keys Harbor.

Fla., Tampa—War Dept., Washington, eliminate curves in ship channel from docks to Egmont bar; present channel depth to be maintained by constant dredging; \$748,000 authorized, provided by Rivers and Harbors Act, signed by President.

La., Bossier City—Bd. of Commrs., Gravity Drainage Dist., Parish of Bossier City, let contract to G. T. Shaw, 939 Delaware St., Shreveport, at 25 cents on each item, consisting of: Item 1, 4, 6 and 8-ft., 15-ft. bottom ditches,  $1\frac{1}{2}$  to 1 slopes; clear right-of-way 70 ft. wide; Item 2, 4, 6 and 8-ft. bottom ditches,  $1\frac{1}{2}$  to 1 slopes, spread waste banks; Item 3, 4, 6 and 8-ft. bottom ditches,  $1\frac{1}{2}$  to 1 slopes, spread soil banks and use same to fill low spots; Item 4, 2 $\frac{1}{2}$ -

ft. bottom ditches, 3 to 1 slope, spread spoil banks; Item 5, 4, 6 and 8-ft. and 15-ft. bottom ditches, 1½ to 1 slopes, clear and grub 200-ft. right-of-way and spread spoil bands. 7-3

Miss., Hattiesburg—Kamper Park Comsn. soon let contracts for drainage canal. Kamper Park; \$25,000.

North Carolina—U. S. Engr. Office, Wilmington, opens bids Aug. 15 for dredging approx. 5,568,975 cu. yd. material, southwest portion of Section III, Intracoastal Waterway, Beaufort to Cape Fear River; same date for dredging approx. 6,363,020 cu. yd. material, northeast portion, Section III.

N. C., Thomasville—City Council approved project of draining Hunt's Fork and signed petition for drainage submitted by delegation consisting of R. L. Molsinger, J. A. Clinard and associates.

North Carolina—U. S. Engr. Office, Norfolk, Va., let contract to Arundel Corp., Pier 2, Pratt St., Baltimore, Md., for dredging, 1,919,639 cu. yd., at 10.4 cents per cu. yd., Alligator River, Alligator River-Pungo River Land Cut, Wilkerson Creek and Pungo River. In dredged channel of Inland Waterway, Norfolk, Va., to Beaufort Inlet, N. C. 6-12

Tex., Galveston—County Comms. Court let contract to John Jacobson, 2311½ C St., for maintenance dredging on Bolivar Channel, at \$15,000.

Virginia—U. S. Engr. Office, Norfolk, Va., opens bids July 25 for dredging approx. 1-425,382 cu. yd. material, place measurement, James River, between Newport News and City Point.

Va., Norfolk—Ch., Bureau of Yards and Docks, Navy Dept., Washington, D. C., bids July 30 for dredging at naval operating base, Hampton Roads.

### Electric Light and Power

**Electric light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details.**

Ala., Headland—Alabama Power Co., Birmingham, plans rebuilding of distribution system and service lines of recently acquired electric light and water plants; preliminary survey will be made by engineers of company at an early date; J. H. Carroll, Local Mgr.; Alabama water property taken over by Alabama Water Service Co.; city council granted franchises to both companies and entered into street lighting and fire hydrants contracts. 7-10

Ark., West Memphis—West Memphis Power and Water Co. will construct power and water plant, consisting of transmission line, with Diesel plant; also contemplate drilling artesian well and laying water mains for purposes of supplying town with water. 7-10

Fla., Jacksonville—City, reported, retained Schofield Engineering Co., Commercial Trust Bldg., Philadelphia, Pa., as consulting engineers for municipal electric department.

Kentucky—Southern Industries & Utilities, Inc., Robt. H. McNeill, National Press Bldg., Washington, D. C., reported promoter, having tentative plans prepared for hydro electric development on Tennessee River; lake to cover 132,000 acres; dam 6000 ft. long and 50 ft. high; W. G. Waldo, Ch. Engr., 2055 Third St., Washington, and Francis R. Weller, Inc., Mills Bldg., Washington, reported engineers. 3-21-29

Ky., Owensboro—City, A. L. Bishop, Supt. of Light and Water Plant, receives bids July 21 for furnishing, delivery and erection at municipal light and power plant of steel smoke stacks, fab. steel anchor posts, etc. See Want Section—Bids Asked.

La., Natchitoches—Robt. Henry, Natchitoches, reported, has contract for addition to light and water plant. 7-3

La., Morgan City—City voted \$175,000 light bonds; plans being prepared by Swanson-McGraw, Inc., Const. Engrs., Balter Bldg., New Orleans, for power and light plant and improvements to water works system; will call for bids about Sept. 1. 4-10

Maryland—East Coast Utilities Co., (subsidiary of Empire Public Service Co., 1600 Arch St., Philadelphia, Pa.) offering \$900,000, 2 yr. 6% convertible secured gold notes through J. A. W. Iglehart & Co., Baltimore; East Coast Utilities Co., a Delaware corporation operates group of electric light and power and telephone properties in 225 communities in North Carolina and Delaware. 4-17

Md., Frederick—Bd. of Alderman, reported, let contract to Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa., and Fairbanks, Morse & Co., Chicago, Ill., for street lighting system. 5-29

Miss., West Point—Town, T. B. Miller, Clk., receives bids July 22 for Diesel engine, etc. See Want Section—Bids Asked.

Mo., Bagnell—General Electric Co., Schenectady, N. Y., reported, has contract for ten 20,000 kv-a. 132,000 volt main transformers for Osage power plant for Union Electric Light & Power Co., 12th and Locust Sts., St. Louis. 7-3

Mo., Caruthersville—City, J. D. Huffman, Mayor, reported, has surveys completed for power and light plant; soon call bond election; Russell & Axon, Engrs., 6290 Easton Ave., St. Louis.

Mo., Farmington—City, C. A. Tetley, Mayor, install white way in business district; Reynolds Electric Co., 122 E. Columbia St., Contr.; C. A. Haskins, Finance Bldg., Kansas City, Constr. Engr.; Westinghouse Electrical Supply Co., 320 S. Broadway, St. Louis, Mch. Contrs.

Mo., Hilmo—City, reported, granted renewal of 20 yr. franchise to Missouri Utilities Co., Cape Girardeau.

N. C., Beaufort—City, K. P. B. Bonner, Mayor, receives bids July 29 for purchase of electric and water systems now owned and operated by city; information, etc., from Utilities Engineering & Management Co., 917 Johnston Bldg., Charlotte.

Oklahoma—Grand Hydro Electric Co., Wash. E. Hudson, Pres., 60th and Peoria, Tulsa, reported, receives bids in about 60 days for construction of hydro electric dam on Grand River; estimated cost \$500,000; Fargo Engineering Co., Jackson, Mich., Const. Engr. 5-29

Okl., Pawhuska—City enlarging light plant, erecting wing.

Tenn., Knoxville—Merger, reported, under way of Knoxville Power and Light Co. and Tennessee Public Service Co., under corporate name of Tennessee Public Service Co.; applied to city council and Tennessee Railroad and Public Utilities Comsn., Nashville, for approval; both companies are subsidiaries of National Power & Light Co., 2 Rector St., New York.

Tenn., Nashville—Tennessee Electric Power Co., Chattanooga, expending \$100,000 for expansion of power distribution facilities at central sub-station on First Ave., N.; work involves replacement of 13,200 volt indoor power equipment at outdoor sun station on Second Ave., N.

Texas—Central Power and Light Co., San Antonio, plans transmission line connecting Lower Rio Grande Valley with transmission system of South and Southwest; interconnection will be made by transmission line extending south from Palmaris and interconnecting at some point in Lower Rio Grande Valley.

Tex., Houston—Southern Trading Co., 805 Chicago, Ill., reported, install power plant to be under city control; initial investment \$110,000.

Va., Alexandria—Virginia Public Service Co., Charlottesville, reported, received 30 yr. franchise for light and power.

Va., Overall—Page Power Co., Luray, reported, plans development of power project; dam 27 ft. high, will cover 270 acres; cost about \$500,000.

W. Va., Charles Town—Northern Virginia Power Co., Winchester, Va., reported, granted 33 yr. franchise for transmission of power along road from city limits at S. Samuel St. extended to junction of South Samuel St. Rd.

### Fertilizer Plants

Fla., Wauchula—S. D. Shore Fertilizer Co., Plant City, reported, plans fertilizer mixing plant.

N. C., Kinston—Smith-Douglass Co., Inc., Board of Trade Bldg., Norfolk, Va., reported, plans erection of 10,000 to 20,000 ton yearly capacity fertilizer plant; cost \$50,000.

### Flour, Feed and Meal Mills

Ark., Camden—Camden Roller Mills Co., W. F. Bradford, Pres., 408 Rosetta St., Little Rock, organized with \$40,000 capital; establish dairy feed and flour mill in building formerly occupied by Camden Cotton Oil Co., W. Center St.

Tex., Sherman—G. B. R. Smith Milling Co., J. Paul Smith, Gen. Mgr., reported, let contract to Jones-Hettelsater Co., Mutual Bldg., Kansas City, Mo., for addition to elevator increasing grain storage capacity by 300,000 bu.; 19 bins, of conc., 110 ft. high; cost of building and equipment \$50,000.

### Foundry and Machine Plants

D. C., Washington—Balluff Mfg. Co., 621 H St., N. W., manufacturer of machinery and parts, has plans for \$50,000 addition to plant; 3 story, 42x91 ft.; E. W. Syme, Archt., 906 15th St.

La., New Orleans—Schaff's Foundry, 2534 St. Peter St., erecting addition to galv. iron pattern shop.

Mo., Springfield—Bodine Ice Machine Co. acquired United Iron Works plant, both 600 Prospect Ave.; manufacture ice machinery, etc.

Mo., St. Louis—A. Kilpatrick Sons Foundry Co., 625 E. Carrie St., recently formed by Alfred B. Kilpatrick and associates, will acquire and expand company of same name, specializing in production of iron castings, cast iron kettles, etc. 6-26

Okl., Tulsa—Improved Steel Gas Engine Head Co., J. S. Newlon, Mgr., Mayo Bldg., leased bldg. adjoining machine shop; install welding shop; purchased machine tools; will require welding equipment; manufactures steel heads for gas engines.

Tex., Luling—Petroleum Machine & Supply, Inc., formed by merger of Trahan-Williams and Ussery Machine Shops, operating in Luling, Darst Creek and Pettus fields; involves 6 shops.

Tex., Waco—San Antonio Machine & Supply Co., Carl C. Kreuger, Pres., 325 N. Centre St., San Antonio, acquired foundry dept., Central Texas Iron Works, 2125 Webster Ave., to be consolidated with Samsco Foundry.

### Garages and Filling Stations

Fla., Jacksonville—C. C. Kirby, Inc., capital \$25,000, chartered; J. W. DuBose, 3516 Herschell St.; automobile business.

Fla., Jacksonville—Miller Electric Co., 487 Riverside Ave., has contract for electrical work in connection with bldg., Clay and Duval St., of Auto Parts Co., 129 Clay St.; G. W. Hessler, Inc., Gen. Contr., 111 W. Ashley St.; Mark & Sheftall, Archts., Clark Bldg. 7-10

Ga., Atlanta—Standard Oil Co. of Kentucky, 746 Marietta St., N. W., probably have plans complete by July 21 for \$125,000 garage and warehouse, rear present building; 2-story, basement, rein. conc., brick, steel sash and doors, built-up roof; private plans. 7-3

Ga., Fitzgerald—Company, of which Franklin H. James is local manager, started erecting \$25,000 wholesale and retail service station.

Ga., Macon—Firestone Realty Co., 672 Poplar St., reported, erect \$50,000 service station.

Ga., Savannah—Goodrich Silvertown, Inc., subsidiary of B. F. Goodrich Rubber Co., Akron, Ohio, postponed erecting super service station, Drayton St. and Oglethorpe Ave., until later in summer or in fall. 6-12

Ky., Paducah—Abell Motor Co., J. Fort Abell, Pres., Fourth and Jefferson St., acquired 200-ft. site, Broadway, for expanding facilities; open filling station and used car dept. at once and later erect plant to cost \$50,000 to \$75,000.

Md., Baltimore—Atlantic Refining Co., 260 S. Broad St., Philadelphia, Pa., applied for permit to erect filling station, Cathedral and Eager St.

Miss., Greenville—Standard Oil Co., Willie Mitchell, Local Mgr., acquired site, Broadway and Alexander St., for filling station.

Miss., West Point—Louisiana Oil Co. erect master station, E. Main St., and smaller station, W. Main St.

Mo., St. Louis—W. E. and E. F. May, 5974 Southwest Ave., let contract to Pahl Contracting & Building Co., 5521 S. Grand Blvd., for \$15,000 sales and service building, 5970 Southwest Ave.; 1 and 2 story, 50x60 ft., brick, conc. foundation; private plans.

Mo., St. Louis—Sinclair Refining Co., 17th and Locust Sts., has permit for \$15,000 service station, 404 Skinker Blvd.; 1 story, 28x100 ft. slate roof; Fruin-Colnon Construction Co., Gen. Contr., Laclede Bldg.; Hoenn-Baum-Forese, Archt., 1 N. Grand St.

N. C., Charlotte—Auto Inn, A. L. Wiley, Jr., Prop., let contract to Little Construction Co., Builders Bldg., for \$15,000 garage, rear Hotel Charlotte, Poplar St.; brick.



N. C., Charlotte—Austin Automobiles, Inc., capital \$20,000, chartered; Jesse W. Page, Jr., Southern Pines; Murdock M. Johnson, Aberdeen.

N. C., Raleigh—Raleigh Motor Co., capital \$50,000, chartered; J. P. Brassfield, 819 N. Bloodworth St.

Okl., Tulsa—Metropolitan Motors, Inc., capital \$15,000, chartered; R. R. McCormick, 416 S. Allegheny St.

Tex., Cotulla—Humble Oil & Refining Co., F. A. Watts, Supt. of Construction, Drawer D, Houston, let contract in few days for filling station, Broadway and Main St.; 1 story, brick, rein. conc.; bids in. 7-10

Tex., Houston—Southern Trading Co., 805 San Jacinto St., leased site, Austin and Capitol St.; plans super service station with parking lot, wash and grease rack, etc.

Tex., Randolph Field, Schertz—Construction Q. M. Capt. A. W. Parker, opens bids about Aug. 15 for garage building to cost about \$150,000. See Buildings Proposed—Government and State.

Tex., Runge—Humble Oil & Refining, F. A. Watts, Supt. of Construction, P. O. Drawer D, Houston, let contract to E. B. Jackson Construction Co., 142 Naples St., Corpus Christi, for filling station; 1 story, brick, rein. conc.

Tex., San Marcos—Texas Co., J. F. Storey & Son, Local Agt., started erecting service station W. Hopkins St.; brick, stucco, tile roof, orna. lattice fence, orna. light posts, wash rack with tile roof; owner builds with E. N. Cade as foreman.

Va., Lynchburg—Shell Eastern Petroleum Products, Inc., Court Square Bldg., Baltimore, Md., advises regarding report that company will erect filling station, have no plans under way for any definite work in this locality. 7-10

Va., Martinsville—Penn Oil Co., has permit for \$10,000 filling station, Church and Lester St.

Va., Norfolk—Tidewater Oil Sales Corp., D. H. Goodman, Belt Line R. R. and Western Branch Road, plans filling stations, Granby and 11th St., Monticello Ave. and 15th St. and 21st St. and Woodrow Ave.

Va., Norfolk—Standard Oil Co., Ninth and Granby Sts., plans filling station, 48th St. and Hampton Blvd.

Va., Pulaski—Gulf Refining Co., Frick Annex Bldg., Pittsburgh, Pa., erect \$60,000 gasoline station; plans complete; soon start construction.

Va., Richmond—R. T. Lipscombe, Industrial Engr., Tuckahoe Apts., organizing corporation to acquire site for parking and automobile servicing terminal, 12th and Franklin St.; to include covered driveway extending through building, 12th to Governor St.; cost, including site, est. \$365,000.

Va., Roanoke—Appalachian Electric Power Co., W. I. Whitefield, Gen. Mgr., erecting \$40,000 garage under Walnut Ave. bridge; 1 story, 190x90 ft.

W. Va., Huntington—State Road Comsn., Charleston, let contract to Hancock & Son, R. & P. Bldg., for 2 buildings to cost approx. \$23,000, Fifth Ave. between 22nd St. and B. & O. R. R.; garage and repair shop and storehouse for supplies, 1 story x 114 ft.; bldg. for storing oil, 20x40 ft.; both fireproof, conc., brick steel.

### Gas and Oil Enterprises

Alabama—Alabama Natural Gas Co., Birmingham, applied to Public Service Comsn., Montgomery, for permission to construct plants and lay gas mains in Wetumpka, Tuskegee, Auburn and Prattville and contiguous territory for distribution of natural gas; hearing Aug. 4.

Ark., Nettleton—Arkansas Power & Light Co., Pine Bluff, reported, has gas franchise.

Fla., Miami—Miami Florida Oil Co., increased capital \$100,000 to \$200,000, William I. Phillips, Sec., 28 Biscayne Blvd.

Ky., Olive Hill—Kentucky Gas Utilities, capital \$50,000, chartered; Austin Gatlin, Charles W. Gilley.

La., Independence—City, reported, granted 25 yr. gas franchise to Robt. S. Phifer, 145 Battle Hill Place and M. L. Culley, Standard Life Bldg., Jackson, Miss.

Ky., Harrodsburg—Utilities Gas & Electric Co., Chicago, Ill., reported, has franchise for erecting commercial gas plant and for distribution; has franchise at Harlan and Middlesboro.

Ky., Prestonsburg—Midland Gas Corp., capital \$330,000, chartered; B. M. James, O. A. Sears.

La., Abita Springs—Town, Barney Carey, Mayor, reported, interested in establishment of natural gas system.

La., Covington—R. S. Phifer, 145 Battle Hill Place, and M. L. Culley, Standard Life Bldg., both Jackson, Miss., reported, granted 25 yr. gas franchise.

La., Oakdale—Moody-Seagraves Co., Esperson Bldg., Houston, Tex., reported, negotiating for gas franchise.

La., Shreveport—LeGrande Oil Co., Inc., capital \$40,000, incorporated; M. K. Smith, Slattery Bldg.

Miss., Bay St. Louis—City, reported, granted 25 yr. franchise to Gulf States Natural Gas Co., subject to ratification by people Aug. 19.

Miss., Collins—Southern Natural Gas Corp., Watts Bldg., Birmingham, Ala., advises lateral from Yazoo City, Miss. to Mobile, Ala., passes through this country and near Collins; work under way on entire project and will go forward rapidly to completion. 7-10

Miss., Hattiesburg—Southern Cities Public Service Co., 105 W. Adams St., Chicago, Ill., and Horace S. Turner, William P. Lewis and associates, Mobile, Ala., reported, applied for gas distribution franchise.

Mo., New Franklin—City, reported, granted 20 yr. gas franchise to Missouri Power & Light Co., Jefferson City.

Mo., North Kansas City—Standard Oil Co., 5501 Ninth St., Kansas City, reported, soon let contract for bulk oil station and distributing plant.

Mo., Shrewsbury—St. Louis County Gas Co., Webster Groves, reported, having plans prepared by Klipstein & Rathmann, 318 N. Eighth St., St. Louis, for 1 story addition to artificial gas plant; cost \$85,000.

Mo., Sedalia—Cities Service Gas Co., natural gas subsidiary of Empire Companies, Bartlesville, Okla., reported, applied to Public Service Comsn., Jefferson City, to extend line from Ottawa, Kan., to here. 5-15

N. C., Mount Airy—D. L. Thompson, represented by Thos. B. Ashby, reported, granted gas franchise.

N. C., Mount Airy—Southern Public Utilities Co., Charlotte, started work on gas system in city; main line from sub station on Gallaway St. completed to Hines Ave.

Oklahoma—Southwestern Natural Gas Co., subsidiary of Appalachian Gas Corp., 46 Cedar St., New York, and Exchange National Bank Bldg., Tulsa, has appointed L. E. Farley, formerly of San Antonio, Tex., to supervise construction of company's 112 mile high pressure pipe line connecting Quinton fields of Oklahoma with Tulsa, Muskogee, Boynton, Sapulpa and other communities, work on which has begun; will be in operation in Fall. 6-5

Okl., Guthrie—City reported issue \$225,000 bonds for artificial gas plant. 6-26

Okl., Oklahoma City—Mabee & Blackstock Oil & Gas Co., capital \$25,000, chartered; J. E. Mabee, 2617 N. Central St.

Okl., Oklahoma City—Oklahoma Gas & Electric Co. started work on \$255,000 brick and steel warehouse; 2 story; day labor. 5-17

Okl., Tulsa—Missouri Valley Refining Co., capital \$150,000, chartered; James T. Reid, 2626 S. Trenton St.

Okl., Tulsa—Transcontinental Oil Co.'s directors called meeting of stockholders Aug. 14 to vote on sale of company's assets to Ohio Oil Co., Findlay, O.; if sale is approved, stockholders will vote Aug. 15 on resolutions calling for dissolution of Transcontinental Oil Co. 6-19

Tenn., Memphis—Memphis Power & Light Co., P. O. Box 1515, will construct 6500 ft. of 8-in. and 3500 ft. of 6-in. gas mains along Poplar Pike from Aulon Viaduct to Goodlett St.; cost \$12,000; materials purchased; work by company's forces.

Tex., Beaumont—Service Oil and Gas Co. increased capital to \$35,000.

Tex., Borger—Phillips Petroleum Co., Bartlesville, Okla., announced purchase of complete natural gasoline plant of Dixon-Creek Oil Co., near Borger; adding 12,000 gal. to Phillips production and furnishing added outlet for residue gas sales of 8 to 10,000,000 cu. ft. daily; purchase carries with it natural gas contracts covering some 2500 acres.

Tex., Big Springs—Great West Refining Co., reported, erect \$100,000 gasoline refinery.

Tex., Eagle Pass—N. A. Saigh Co., 510 Builders Exchange Bldg., San Antonio, reported, has contract for gas distribution system for Texas Gas Utilities Co., Del Rio.

Tex., Laredo—E. H. Page, Laredo, reported, has contract for 1 story refinery and office building for Swift & Co.

Tex., Pampa—Taconian Oil Co., capital \$50,000, chartered; Arthur J. Graham, C. B. Cree.

Tex., San Antonio—Deako Oil Co., 1111 Alamo National Bldg., let contract to Continental Supply Co., Refugio, and Marion Machine & Supply Co., Luling, for pumping rig and equipment. 7-3

Tex., San Antonio—Geophysical Petroleum Corp., Milam Bldg., increased capital to \$30,000.

Tex., Smithville—United Gas Corp., natural gas subsidiary of Electric Bond & Share Co., 2 Rector St., New York, reported, applied for gas franchise, Smithville, Bastrop and Elgin; granted franchise in Schulenberg, Weimar and Hallettsville. 7-3

### Ice and Cold-Storage Plants

La., Shreveport—Home Service Ice Co., Inc., capital \$40,000, chartered; A. W. Dean, Coushatta Rd.

N. C., Hendersonville—City Ice & Storage Co., capital \$100,000, chartered; S. D. Sudduth, Whitted St., Hendersonville; A. L. Sudduth, 1009 Edgewood Circle, Gastonia.

Tex., Fort Worth—J. E. Rasmussen, 2831 Fifth Ave., Howard Brants and associates plan bldg. with 10,800 sq. ft. ice space; 2 story, 250x160 ft., brick; \$150,000; Wyatt C. Hedrick, Inc., Archt., Natl. Bank Bldg.

### Iron and Steel Plants

Ky., Ashland—American Rolling Mill Co., Middletown, Ohio, and Ashland, reported, has over \$1,000,000 available for further improvements at Ashland plant; begin work at once.

### Land Development

Ala., Mobile—Mobile Public Golf Course, Inc., chartered; J. J. McMahon, Flo Claire St.

Fla., Boynton—South Shore Corp. chartered; R. Eberly, R. P. Buford.

Fla., Lake Worth—Venetian Construction Corp., capital \$50,000, chartered; M. Romano, E. Fearnley.

Fla., Winter Haven—Eloise Growers, Inc., incorporated; A. E. Carpenter E. F. Dickson.

Ky., Louisville—Security Real Estate & Title Corp. chartered; Arthur Goldman, 913 S. 42nd St.

La., New Orleans—La-Nasa Realty Co., Inc., capital \$100,000, chartered; Frank L. LaNasa, 6120 St. Claude St.

Mo., Cape Girardeau—Phenix Realty Co., chartered; Julian N. Friant, Will Hirsch.

Mo., Springfield—Theodore R. Oberman, Jefferson City, reported, acquired Osage Development Co., Inc., formed several months ago for developing 200 acre Osage Beach townsite and resort center on lake to be formed by Bagnell dam; work under direction of Fred W. Johnson, Engr., West Drive, Phelps Grove, will include 54 ft. driveway along shoreline of lake.

Mo., St. Louis—Prudential Realty & Investment Co., capital \$35,000, chartered; H. A. Yocum, G. A. Brockfield, both Warren-ton.

Mo., St. Louis—A B C Golf Courses, Inc., incorporated; Benjamin Shapiro, Syndicate Trust Bldg.

Mo., St. Louis—Kingshighway-Maryland Golf Club, chartered; Louis E. Ford, 4534 Olive St.

Mo., St. Louis—Lilliputian Golf Corp., chartered; Theodore F. Fowler, 43 Kingshighway St.

Mo., St. Louis—Maplewood Golf Corp., chartered; Theodore Fowler, 43 Kingshighway.

S. C., Charleston—Isle of Palms, Inc., B. H. Hardaway, Jr., Pres., reported, plans development of golf course.

Tex., Big Spring—Rix Realty Co. chartered; Harvey L. and Ralph W. Rix.

Tex., Houston—Industrial Properties Co., capital \$125,000, chartered; J. G. Flynn, Medical Arts Bldg.

Tex., Texarkana—Commonwealth Realty Co., capital \$100,000, chartered; Joseph Eldridge, Louis Heilbron.

Va., Clarendon—Grinder Tract, Inc., capital \$300,000, chartered; Avon M. Nevius, 2915 Albemarle St., N. W., Washington, D. C.

Va., Lynchburg—Jackson Golf Course, Inc., incorporated; B. P. Thornhill, Jr., 3421 Summerville St., operate miniature golf course.

Va., Norfolk—Adsl Realty Corp., chartered; I. M. Adler, 312 Granly St.

Va., Virginia Beach—Tidewater Virginia, Inc., capital \$25,000; chartered; F. Nash Billisoly.

Va., Waverly—PeKo Amusement Parks, Inc., capital \$50,000, chartered; Frank P. Pulley; establish and operate golf courses.

### Lumber Enterprises

Ky., Lewisburg—Bland & Day Tie & Lumber Co., capital \$100,000, chartered; O. A. Bland, George H. Day.

Ky., Louisville—C. W. Buckley Lumber Co., capital \$90,000, chartered; H. W. Batson, Marion E. Taylor Bldg.

Okla., Muskogee—Commercial Lumber Co., capital \$20,000, chartered; Claude Siedd, 416 N. Fourth St.

Va., Webster Springs—W. B. Tracy acquired tract containing approx 2,000,000 ft. timber; erect mill with 10,000 ft. daily capacity.

### Metal-Working Plants

Tex., Wichita Falls—Hager Sheet Metal Co., 215 Indiana St., increasing capital, \$10,000 to \$50,000.

### Mining

Mo., Carthage—C. F. Denny, Iola, Kans., and Chicago, Ill., and associates acquired Osage mining lease near Knight's Station; plan developing; erect mill and drill extensively on adjoining land.

### Miscellaneous Construction

Ark., Little Rock—Missouri Pacific R. R. Co., E. A. Hadley, Ch. Engr., St. Louis, Mo., construct subway under tracks, Third and Poplar St., with own forces. 7-10

D. C., Washington—Bureau of Fisheries started work on country-wide 5-yr. construction and maintenance program in accordance with act approved May 31, authorizations for new construction by years in South include: 1930—Louisiana, \$50,000 for cultural stations; experimental bass and trout station, Maryland or West Virginia, \$75,000; 1931—Cultural stations, Alabama, \$50,000; Tennessee (Middle), \$50,000; substations, South Carolina (or enlargement of Orangeburg station, \$25,000; Texas (Western), \$35,000; 1932—Cultural station, Florida, \$60,000; substations, Virginia (Eastern), \$75,000; fishery laboratory, Texas (Gulf Coast), \$75,000; 1933—Substation, Mississippi (Southern), \$50,000; 1934—Substations, Georgia, \$35,000; experimental and bass and trout station, Pisgah National Forest or Great Smoky National Park, North Carolina, \$35,000.

Florida—See Drainage, Dredging and Irrigation.

Fla., Jacksonville—Miller Electric Co., 487 Riverside Ave.; has contract for electrical work in connection with plant of Southland Dairy Products Co.; George D. Auchter Co. 1361 Avondale St., Gen. Contr. 5-8

Ky., Glenn Springs—Kentucky Game & Fish Comsn., Frankfort, let contract to J. M. Perkins, Frankfort, for \$25,000 fish hatchery; Ed. Rand, Engr., Vanceburg.

Louisiana—U. S. Engr. Office, foot of Prytania St., New Orleans, has low bid from Lewis-Chambers Construction Co., Inc., Canal Bank Bldg., New Orleans, for constructing Chatsworth and Grenada levees, containing approx. 1,025,000 cu. yd. earth work, Second New Orleans Dist., at 17.94 cents for Chatsworth New Levee, 615,000 cu. yd., and at 19.01 cents for Granada New Levee, 410,000 cu. yd. 6-5

La., New Orleans—Mississippi Warror Service, 320 Magazine St., has low bid from Lionel F. Favret, Louisiana Bldg., at \$11,279, for altering present 100x65-ft. shed, foot of Galvez St., into office bldg.; bids taken under advisement; improvements to include screens, hardware, struc. and misc. steel, steel rolling doors, sheet metal work, elec. wiring, plumbing, painting, glazing, etc.

La., New Orleans—Bd. of Commrs., Port of New Orleans, New Orleans Court Bldg., opens bids July 22 for reconstructing Charbonnet St. wharf and for altering 12 cranes at public cotton warehouse; plans at office of board. 4-10

Md., Baltimore—Piers—See Miscellaneous Enterprises.

Miss., Tupelo—Bd. of Aldermen probably call bond election later in summer for swimming pool and small park site.

Mo., Kansas City—Pla-Mor Co., 200-30 Main St., construct \$100,000 swimming pool.

Mo., Kansas City—J. F. Eubank, Pres., Forest Park Cemetery, Houston, Tex., reported, let contract to C. A. Kelly, 313 Karnes Blvd., for \$400,000 mausoleum.

Mo., St. Louis—Jones-Hettelsater Construction Co., Mutual Bldg., Kansas City, Mo., has contract for \$300,000 addition to feed mill and elevator of Ralston Purina Mills, 835 E. Eighth St.; 8 story, 86x125 and 34x58 ft. 6-26

Tex., Dalhart—Rita Blanca Lake, new corporation, being formed by Earl S. Carter, C. C. Dinwiddle and associates; has construction under way on dam across Rita Blanca Canyon at site of Blair dam on Andy James property west of city, to be completed in August or September.

Tex., Fort Worth—Greenwood Cemetery, A. W. Linn, 3912 Monticello St., let contract to H. W. Underhill Construction Co., Construction Industries Bldg., for \$65,000 chimneys; cut stone, orn. iron and bronze, base 22x22 ft., 72 ft. high; taking sub-bids.

Tex., Houston—Harris County-Houston Ship Channel Navigation Dist., E. M. Moursund, Engr., Court House, let contract to William A. Smith, 5600 Canal St., at \$87,358, for installing 4 mi. railroad tracks at port terminal yards, to provide for placing over 300 cars, and for constructing track at public grain elevator; to be complete in about 90 days. 7-3

Tex., Sherman—G. B. R. Smith Milling Co. let contract to Jones-Hettelsater Co., Mutual Bldg., Kansas City, Mo., for 300,000-bu. addition to grain elevator.

Va., Newport News—Chesapeake & Ohio Ry. Co., C. W. Johns, Ch. Engr., Richmond, let contract to Industrial Brownhoist Corp., 4403 St. Clair Ave., Cleveland, Ohio, for machinery for coal pier; capable of dumping 50 120-ton coal cars per hour, to be equipped with mechanical trimmer consisting of high-speed belt, which will throw coal and which will be used in trimming ships; pier and machinery cost approx. \$2,210,000; W. Horace Williams Co., Gen. Contr., 833 Howard Ave., New Orleans, La. 6-5

Va., Norfolk—Norfolk Terminal Elevator Corp., capital \$100,000, chartered; F. E. Davis; operate grain elevator.

West Virginia—War Dept., Washington, construct 2 locks and dams and channel 9 ft. deep, 200 ft. wide in Kanawha River, Southern West Virginia; \$3,602,000 authorized; provided by Rivers and Harbors Act, signed by President; locks to be of standard Monongahela type, 65x60 ft., with 9 ft. over miter sills.

### Miscellaneous Enterprises

D. C., Washington—Stone Straw Co., manufacturer of soda straws, erect \$203,000 plant, 910 Franklin St., N. E.; 5 story, basement, 125x80x89 ft., conc. brick; accommodate activities of Stone Straw Corp. and Stone Paper Tube Co., both 30 O St., N. E.; Boyle Robertson, Inc., Evans Bldg., Gen. Contr., I. H. Harris, Archt.

Fla., Miami—Anto Erozon Laboratories, Inc., capital \$30,000, chartered; W. S. Hall, 951 1/2 N. W. Third St.

Ga., Savannah—Independent Bakeries, Inc., Maj. George C. Heyward, Jr. Counsel, Realty Bldg., being formed to erect 2 plants to make 16-oz. loaves of bread.

La., DeRidder—Illinois Steel Wire Mfg. Co., Joliet, Ill., establishing branch plant to manufacture wire and picket fence material; consume 25 to 40 carloads material monthly.

La., Hammond—Miraflores Poultry Yards, Avalon Terrace, opens bids July 19 for 2 buildings.

La., New Orleans—A. S. LaNasa's Bakery, Inc., capital \$75,000, chartered; Mrs. A. S. LaNasa, 6117 St. Claude St.

La., Shreveport—Art Craft Press, Inc., capital \$12,000, chartered; J. S. Ramond, 519 Travis St.

Md., Baltimore—Baltimore Mail Steamship Co., capital \$10,000,000, formed to open direct service between Baltimore and Hamburg via Norfolk, Va.; Donald Symington, Pres., also Pres. Balto. Tr. Co.; John M. Franklin, of Roosevelt Steamship Co., N. Y., Exec. V-Pres.; A. J. County, V-Pres., Pennsylvania R. R., Philadelphia, Pa., George M. Shriver, Sr. V-Pres., Baltimore & Ohio R. R., Baltimore, and others, directors; new line to use Canton Co.'s piers here, recently acquired by Pennroad Corp., holding company for Pennsylvania R. R.; reported, expend \$5,000,000 reconstructing and re-equipping piers for handling passengers, mail and freight; recondition liners at cost of approx. \$1,500,000 each.

Miss., Jackson—City will purchase additional apparatus for Fire Dept.; taking bids on 1000-gal. pumper and city service truck.

Miss., Oxford—Lamb Bros., operating dry cleaning and pressing plants, Water Valley and Durant, acquired plant here operated by Earl Fudge and Robert Farley; J. W. Lamb to have charge.

Mo., Cameron—Sun Publishing Co., capital \$25,000, chartered; C. P. Dorsey.

Mo., Kansas City—Harden Engineering Corp., chartered; G. S. DeLooze, 917 Walnut St.; chemical and mechanical engineering, etc.

Mo., St. Louis—U. S. Lacquer & Chemical Co., capital \$150,000, chartered; D. V. Davis, 6655 Kingsberry St.

Mo., St. Louis—Jordan-Scheid Fixture Co., 913 Market St., capital \$15,000, chartered; Walter C. Jordan, 2716 Osceola St.; office and store fixtures, scales, etc.

Mo., St. Louis—Green-Wal Golf Co., Inc., capital \$25,000, chartered; George Kivovich, 5126 Brookwood St., Kansas City; golf equipment.

Mo., St. Louis—Moss Construction Co., chartered; Joel E. Moss, 329 Belt St.

Mo., St. Louis—Arco Co., Inc., capital \$50,000, chartered; Edward N. Weber, 1302 N. Newstead St.; manufacture shower curtains, store and window valances, table covers, etc.

N. C., Charlotte—Ajax Rubber Co., Racine, Wisc., reported, moving plant here; tires of above company to be manufactured here.

N. C., Elkin—H. F. Laffoon and C. S. Foster acquired Elkin Tribune and business of Elk Printing Co., Franklin Hildebrand.

N. C., Reidsville—Service Printing Co., capital \$20,000, chartered; W. T. Walker, Janie K. Rawley.

Okla., Oklahoma City—Oklahoma Mop & Sanitary Specialty Co., capital \$15,000, chartered; Fred Cox, 600 W. 11th St.

Okla., Tulsa—Smith Construction Co., capital \$15,000, chartered; H. W. Hayden, 313 S. Lansing St.

Tenn., Chattanooga—Chattanooga Coca Cola Bottling Co., 214 Fort st., start erecting \$100,000 bottling plant, Broad and Second St.; 2 story, basement, main bldg., 82x120 ft., fireproof, rein. conc., brick, steel sash, tile floors, struc. steel, comp. roof; garage and heating plant, 130x50 ft.; Mark K. Wilson, Power Bldg., has general contract, including mechanical equipment; William Crutchfield, Archt., First Natl. Bank Bldg. 3-13

Tenn., Shepherd—Lake Rosetta, Inc., capital \$100,000 chartered; Ben H. Testerman, 2012 Lake Ave., Knoxville.

Tex., Canutillo—C. L. Ezell, Inc., capital \$25,000, chartered; C. L. Ezell; building and real estate.

Tex., Corsicana—Dr. Pepper Bottling Co., capital \$20,000, chartered; W. F. Moore, H. A. Dubey.

Tex., Dallas—Tennessee Dairies, Inc., 300 N. Crowder St., increasing capital, \$200,000 to \$300,000.

Tex., Fort Worth—Falfurrias Chemical Co., Falfurrias, changing name to Texas Calcium Co. and place of business to Fort Worth.

Tex., Houston—Hoffman Mfg. & Development Co., E. J. Hoffman, Pres., break ground within 30 days for plant to manufacture spring wheel for automobiles, non-glare headlights and double action, 2-way pumps.

Tex., Karnes City—Dan W. Huffer, Brady, acquired Karnes Citation, weekly newspaper, formerly owned and operated by A. C. Dietz.

Tex., San Antonio—E. Y. White, 701 Broadway, let contract to Lon T. Wright, Milam Bldg., for laundry; Robert B. Kelly, Archt., Milam Bldg.; M. L. Driver, Engr., Calcasieu Bldg. 7-10

Tex., Waco—Swift & Co., Union Stock Yards, Chicago, Ill., let contract to J. E. Johnson Construction Co., 1000 Franklin Ave., Waco, for \$60,000 meat packing and cold-storage plant; majority of equipment contracts let.

Va., Cape Charles—Peninsula Ferry Corp., capital \$500,000, chartered; Clark W. Harrison, 501 Fifth Ave., New York; operate ferry for transporting freight, passengers and U. S. mail.

Va., Clarendon—Northern Virginia Construction Co., Inc., chartered; A. F. Campbell.

Virginia—McClintic-Marshall Co., Oliver Bldg., Pittsburgh, Pa., has contract for 1000 tons struc. stel for chemical plant, Pine Ridge.

Va., Emporia—Emporia Ice Co., Inc., capital \$15,000, chartered; P. E. Prince; ice, coal, wood, building material.



Va., Newport News—Horace E. Dodge Boat & Plane Corp., Horace E. Dodge, Pres., 3 E. 52nd St., New York, and Newport News, reported, plans expansion in fall to increase present capacity of approx. 40 complete motor boats daily under 24-hr. schedule.

Va., Strasburg—National Fruit Products Co., Inc., Woodward Bldg., Washington, D. C., acquired cider plant of Shenandoah Apple Products Corp., consisting of cider vinegar plant and canning plant.

W. Va., Charleston—Great Kanawha Barge Line, Inc., capital \$50,000, chartered; George E. Southerland, 913 Kanawha St., hauling and tug boat business.

W. Va., Huntington—Wesvir Mfg. Co. being formed by C. W. Watts, Pres., Watts, Ritter & Co., Masonic Bldg., to take over prison contract for West Virginia Penitentiary for manufacture of men's shirts.

### Motor Bus Lines and Terminals

Georgia—Following applied to Georgia Public Service Comsn., Atlanta, for bus line permits: Williams Transportation Co., 1944 E. Clayton St., Athens, to operate freight and express service, Athens to Georgia-North Carolina line via Gainesville, Cleveland, Blairsville, Young-Harris and Hiwassee; E. F. Long, Tate, freight line, Atlanta to Blue Ridge; Hood Coach Lines, Inc., Ralston Hotel Bldg., Columbus, passenger line, Bainbridge to Albany via Camilla and Newton; W. D. Stephens Transfer Co., 1069 Seaboard Ave., N. E., Atlanta, passenger line, Atlanta to Albany via Griffith, Thomaston, Butler and Leesburg.

Missouri—Public Service Comsn., Jefferson City, authorized C. R. Hastings, St. Joseph, to sell to Missouri Transit Co., Columbia, certificates to operate cross-state line over Hwy. 36, St. Joseph to Hannibal line, Hannibal to Quincy, Ill., over Hwy. 61 and 24, and for line, St. Joseph to Kansas City via Cameron, Hwy. 71, 1, 36 and 33.

N. C., Charlotte—J. C. Warren Transfer Co., 210 W. Fourth St., applied to City for permission to operate buses between Independence Square and Wilora Lake and McAlpine's Beach.

Tenn., Knoxville—Tennessee Coach Co., 428 State St., and Union Transfer Co. acquired Consolidated Bus Lines, 315 W. Depot St., operating between Knoxville and Nashville.

Tex., San Angelo—J. P. Kittrell and A. W. Ritter plan operating bus system; operate 2 Red and White buses.

Va., Roanoke—Roanoke Public Warehouse, W. H. Coleman, Mgr., 369 Salem Ave., W., acquired Kimball Hotel, W. Salem Ave., expending \$45,000 remodeling for terminal to be known as Roanoke Truck Depot, serving 13 trucking lines.

### Railways

Ala., Birmingham—Warrior River Terminal Co., Maj. Gen. T. Q. Ashburn, Brown-Marx Bldg., expend \$100,000 at once for further improvements to railroad line between Birmingham and Birmingham.

Ga., Deepstep—American Industrial Clays Co., Inc., of Georgia, open 2 lines with over 25 mi. trackage southeast of Macon in connection with large kaolin deposits and to connect plant near here; Oconee & Deepstep R. R. Co. already formed by E. N. Ennis, Oconee, and associates; firm of which E. J. Grassman, Elizabeth, N. J., is president, awaiting action of Interstate Commerce Comsn., to start construction on lines; soon take out charter for company to operate second line, Deepstep to Devereaux, 19½ mi (See Sandersville, 5-8)

Mo., St. Louis—Bd. of Public Service plans taking bids for interlocking plant at crossing of tracks at southern approach to municipal bridge and those of Missouri Pacific; \$125,000; private plans.

Mo., St. Louis—Missouri Pacific R. R. Co., L. W. Baldwin, Pres., reported, authorized by Interstate Commerce Comsn., Washington, to acquire and operate as unit with own line railroad corporations which it now controls and operates as separate units, including: New Orleans, Texas & Mexico Ry. Co.; International-Great Northern R. R. Co.; St. Louis, Brownsville & Mexico Ry.; Orange & North Western R. R.; New Iberia & Northern R. R.; Iberia, St. Mary & Eastern; Houston & Brazos Valley Ry. Co.; San Benito & Rio Grande Valley Ry. Co.; San Antonio, Uvalde & Gulf R. R. Co.; Sugar Land Ry. Co.; Rio Grand City Ry.; San Antonio Southern Ry. Co.; Beaumont, Sour Lake & Western Ry.; Houston North Shore Ry.; Natchez & Southern Ry. Co.; Natchez & Louisiana Ry. and Transfer Co.; New Orleans and Lower Coast R. R. Co.; Fort Smith Suburban Ry. and Missouri Pacific R. R. Corp. in Nebraska.

Mo., Washington—Missouri Pacific R. R. Co., P. M. Gault, Signal Engr., St. Louis, let contract to General Ry. Signal Co., Ry. Exch. Bldg., St. Louis, for extending centralized control signaling system to include 18 mi. double and 3.5 mi. single track between Kirkwood and Washington.

Texas—Atchison, Topeka & Santa Fe Ry. Co., M. J. Collins, Gen. Pur. Agt., Chicago, Ill., purchased 18 carloads culvert pipe from American Casting Co., East Birmingham, Ala., for use on line, Kansas and Texas.

Tex., Houston—Trinity & Brazos Valley Ry. Co., J. A. Hulen, Receiver and Pur. Agt., changing name to Burlington-Rock Island R. R.; consists of 302 mi. main line extending from belt line junction outside Houston to Teague to Waxahachie and Teague to Cleburne; enters Houston and Fort Worth under trackage rights.

Texas—St. Louis-San Francisco Ry. Co., J. M. Kurn, Pres., St. Louis, Mo., announced plans for 2 extensions, Vernon to Seymour and Seymour to Paducah, authority for which is sought from Interstate Commerce Comsn., Washington. 4-11-29, 6-6-29 and 7-10-30

### Railway Shops and Terminals

Ky., Stephens—Chesapeake & Ohio Ry. Co., C. W. Johns, Ch. Engr., Richmond, Va., applied to U. S. Engr. Office, Huntington, W. Va., for permission to construct additional water supply facilities; includes laying 4 12-in. pipe lines on river bed and constructing conc. intake pump, 16x18 ft., Ohio River.

### Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

#### Proposed Construction

Alabama—State Highway Dept., Montgomery, plans advertising for bids on Trunk Line Highway construction, including Bee Line Highway north and south through state.

Ala., Montgomery—City Comsn. plans paving four streets in Ridgecrest; also Herron and S. Jackson streets, from High to Thurman.

D. C., Washington—District Commrs., Room 509, District Bldg., receives bids July 21 for 50,000 cu. yds. grading, various streets; information from Room 427.

Georgia—State Highway Board, Atlanta, award contracts July 30 for roads totaling \$1,000,000; probably include Waycross-Brunswick Highway, Nahanta to Atkinson; Macon-Brunswick Highway, between Jesup and Hawkinsville.

Ga., Columbus—City, H. B. Crawford, Mgr., receives bids until July 28 for conc. paving with curb on Talbotton Road, 12th Ave. to junction with Warm Springs Road and then with 20-ft. conc. pavement to end of existing county pavement at eastern limits of city; 500 lin. ft., 6x18 in. vertical face conc. curb, 10 cu. yd. refill, 332 sq. yds. 6-in. plain cement conc. pavement.

Ky., Morganfield—Foster & Creighton Co., Fourth and First Bldg., Nashville, Tenn., has contract for 15 miles conc. paving on U. S. Highway 60, in Union County.

Ky., Paducah—Bd. of Commrs., Jack W. Nelson, Mayor Pro-tem, plans sidewalks north side Jefferson St., 25th to 27th Sts.

Louisiana—State Highway Comsn., Baton Rouge, received following low bids: Pointe Coupee Parish—conc. drainage structures, Lottie-Livonia Hwy., from George P. Hopkins, Gulfport, Miss., \$8783; St. Landry and Pointe Coupee Parishes—surfacing for highway trestle approaches to Missouri Pacific bridge, Livonia-Opelousas highway, from T. L. James, Ruston, \$4993; bids postponed for Saline Bayou Bridge, Luella-Kadesh Hwy., in Natchitoches and Winn parishes.

La. Mangum—Sub-Road Dist. No. 6 of Richland Parish voted \$100,000 bonds for improving roads.

La., Monroe—City Council receives bids until July 23 for sheet asphalt paving on Erin St., Sixth to Seventh; I St., Third to Sixth; Park Ave., Willow to 12th; W. I. Neel, City Engr.

La. Tallulah—Madison Parish Police Jury, P. O. Benjamin, Sec., receives bids July 23 for \$350,000 bonds for roads and bridges.

Maryland—State Roads Comsn., G. Clinton Uhl, Chmn., Baltimore, receives bids July 22 for 5 roads: Anne Arundel County—Contr. No. AA-94-711, 3.31 mi. conc. shoulders on Crain Hwy., Glenburnie toward Benfield; Baltimore City—No. BC-93-72, 57 mi. sheet asphalt, Walther Ave., Harford Rd. to Weaver Ave. and from Grindon Ave. to Southern Ave.; Prince George's County—No. P-128-311, 7 mi. conc. sidewalks, Baltimore-Washington Blvd., thru Laurel; No. P-121-311, 15.1 mi. conc. shoulders, Defense Hwy. Bladensburg to Crain Hwy. and along the Crain Hwy. from Pigeon Inn to Defense Hwy.; St. Mary's County—No. SM-69-84, 2 mi. gravel, on St. Hwy. from end of Contract No. SM-45, south of New Market toward Budd's Creek.

Maryland—State Roads Comsn., Baltimore, received low bids: Carroll County—Contr. No. Cl-86-511, 4.87 mi. bituminous resurfacing, Taneytown Rd., from near Branch to Fountain Valley, E. C. Valentine, Frederick \$45,654; Washington County—No. W-77-62, 1.95 mi. penetration macad., National Pike near Hancock towards Woodmont Club, Thomas, Bennet & Hunter, Westminster, \$51,209; Prince George County—No. P-123-32, 1 mi. penetration macadam along Hunt's Corner-Gordon's Corner Rd., end of Contr. P-102 to Gordon's Corner, H. E. Gosnell & Co., Frederick, \$20,540; Harford County—No. H-84-42, 3.18 mi. penetrat. macad., resurfacing, Dublin, towards Ady. from T. B. Gatch Sons, Inc., 5937 Belair Rd., Baltimore; Cecil County—No. Ce-89-22, 1.25 mi. conc., Rising Sun-Fairhill Rd. towards Fairview, from G. & L. Contracting Co., 3509 Northern Parkway, Baltimore, \$25,865; Montgomery County—No. M-1553-311, .98 mi. conc. shoulders, Seek's Corner to Avenel, from Jarboe & Houghton, Mechanicsville, \$6765; Charles County—No. Ch-91-84, 1.23 mi. gravel, Allen Fresh-Neport Rd. towards Newport Catholic Church, Southern Maryland Construction Co., 14 E. Lexington St., Baltimore, \$9273.

Md., Baltimore—City, Bd. of Awards, received low bid for Contract No. 141 at \$18,716 from P. E. Rawlings & Son, 2400 Aisquith St., for Footway Contract No. 118, at \$28,554 from Petetr Averza, 104 N. Highland Ave.

Md., Towson—Baltimore County Commrs., John R. Haut, Ch. Clerk, receives bids July 22 for roads in Group No. 8; improving Lyons Mill Rd. from end of conc. northwest, .22 mi. conc.; improving McDonough Rd., from Lyons Mill Rd. to Winens Rd., about .62 mi. conc.; both Second Dist.

Miss., Greenwood—City Council plans paving Grand Blvd.

Miss., Starkville—Oktibbeha Bd. of Supervisors, J. C. Page, Pres., plans \$16,000 roads in Supervisors Dist. No. 1.

Mo., Clayton—St. Louis County, Roy Jablonsky, Engr., receives bids July 23 to improve Geyer Rd. from Missouri Pacific right-of-way to Big Bend Rd.; Delmar Blvd. from Hanley Rd. east to Wellesley Ave.; Ravenswood Ave., from Stratford to Oxford Lane; Julian Ave., from Sutter to Elva; Walter E. Miller, Clk.

Mo., Clayton—St. Louis County Court received following low bids: from Keeley Brothers Construction Co., 4301 State St., at \$101,130 for 20-ft. conc. pavement Big Head Rd., between Wilhusen Rd. and western boundary of Webster Groves; Moore Brothers Construction Co., 2000 St. Clair St., \$36,446, 20 ft. pavement, Ladue Rd., between Warson and Denny Roads; Keeley Bros., \$22,760, concreting Delmar Blvd., between North and South Rd., and Old Bonhomme Rd. in University City; Fling Paving Co., 1405 S. First St., all St. Louis, \$38,375, 20-ft. conc. pavement, Maryland Ave. from western boundary of Clayton to Hanley Rd.; Edward Felsig, \$6042, 20-ft. conc. pavement, Lincoln Ave., between Greenway Ave. and Hunter Rd.; E. G. McKenna Construction Co., 7353 Olive St. Rd., St. Louis, sidewalks, \$1885 S. Milton Ave.

Mo., St. Louis—City Bd. of Public Service, City Hall, receives bids July 29 for improving following streets: Letting 4055—Calvary from W. Florissant to intersection with N. and S. Calvary avenues and N. and S. Calvary avenue from Calvary to Broadway; Letting 4056—Chippewa from Morganford to Kingshighway; Letting 4057—E. Iowa, W. Iowa, S. Gasconade, N. Gasconade and Gasconade St., from Ohio to E. Iowa and from W. Iowa to California; Letting 4058—Compton from Delor to Liberty.

Mo., Webster Groves—Missouri Pacific R. R. Co., E. A. Hadley, Ch. Engr., St. Louis, and St. Louis County Court, Clayton, understood to have accepted proposal of Missouri Public Service Comsn. for construction of \$80,000 viaduct over Lockwood Ave., 1000

ft. east of west city limits; Missouri Pacific to build structure and to be reimbursed by county and Public Service Co.

North Carolina—State Highway Dept., John D. Waldrop, Engr., Raleigh, receives bids July 29 for highways and bridges involving \$400,000; including Proj. 6,811, Scotland County, 16 mi. of topsoil or sand clay road, Hwy. 241 from Laurinburg to Hoke County line; Proj. 6,120, Anson County, 8 mi. hard surfacing, Hwy. 80, Wadesboro to Morven; Proj. 6,131, Anson County, 9 mi. hard surfacing, Hwy. 80, Wadesboro toward Ansonville.

Oklahoma—State Highway Comsn., Lew Wentz, Chmn., Oklahoma City, receives bids July 21 on about 60 mi. of paving; also for 10 mi. asphalt topping on gravel road west of Idabel; 60 miles includes 8 mi. on State Hwy. 33, between Drumright and Cushing, in Payne County; 11 mi. Hwy. 77, in McClain County; 15 to 20 mi. Highways 73 and 27, Muskogee County; 5 mi. U. S. Hwy. 70, Carter County; 7 mi. U. S. Hwy. 81, Jefferson County; 6 mi. State Hwy. 18, Tecumseh south, Pottawatomie County; 2½ mi. State Highway 48, Konawa South, Seminole County, Creek County—8.3 mi. paving U. S. Hwy. 75, between Sapulpa and Mounds; Muskogee County—7 mi. paving, U. S. Hwy. 73, Oktaha north to Muskogee, 3.5 mi. Muskogee to Forst Gibson, 6 mi. from end of paving near Yahola south on Boynton Rd.; 10 mi. grading and draining, U. S. Hwy. 64, between Warner and Webber Falls.

Okl., Claremore—State Highway Dept., A. R. Losh, Ch. Engr., pave during winter U. S. Hwy. 66, Claremore, north to Vinita.

Okl., Oklahoma City—City Council ordered widening of Second St., Santa Fe Tracks to Walnut Ave., 10 ft. on each side; E. M. Fry, Mgr.

South Carolina—State Highway Department, Ben M. Sawyer, Ch. Commr., Columbia, receives bids until July 29 for following: Paving with plain Portland cement concrete—State Proj. 560, Marlboro County, 10-359 mi., Route 30, Bennettsville to N. C. line; Federal Aid Proj. 39-A & C Contr. 2 and St. Proj. 562, Georgetown County, 12.113 mi. Route 40, Santa River to Sampit River; F. A. Proj. 179 and 307, Colleton-Dorchester Counties, 8.648 mi. Route 30, St. George to Edisto River; State Proj. 731 Contr. 3 and 722-A&B, Abbeville-Greenwood Counties, 13.26 mi. Route 24, Anderson County line, near Honea Path to Hodges; F. A. Proj. 291-A Sec. 2, Contr. 2 and 291-A Ext. Contr. 2, Chesterfield County, 11.825 mi. Route 40 from Conway to Pee Dee River at Yauhanua; F. A. Proj. 90 Sec. 2 and 126 Contr. 2, and St. Proj. 531 Contr. 2, a Fairfield County, 13.607 mi. Route 21, Winnsboro to Richland County line; St. Proj. 545, Lexington County, 14.177 mi. Route 24, Batesburg to point near Fair View Cross Rds.; F. A. Proj. 308, Clarendon County, 10.23 mi. Route 4, Manning to Summerton; St. Proj. 557, Colleton County, 11.389 mi. Route 30, Waltherboro to Edisto River; F. A. Proj. 267 and 223, Georgetown County, 21.42 mi. Route 40, Georgetown to Pee Dee River; St. Proj. 689-A&B Contr. 2, Lancaster County, 17.13 mi. Route 26, Lancaster to Kershaw County line; St. Proj. 661-B, Kershaw County, 5.969 mi. Route 26, Boykin's Mill toward Sumter; F. A. Proj. 4 Contr. 2, York County, widening 3 mi. Route 5, Rock Hill toward Fort Mill; F. A. Proj. 74, Marlboro County, surface treatment 6.77 mi. Route 1, from Route 9 to N. C. line; F. A. Proj. 12, 16, 86, 193, and 212, Allendale-Barnwell-Aiken Counties, surface treatment 49.62 mi. Route 28, Allendale to Savannah River near Augusta; F. A. Proj. 80 and 301, Union-Newberry Counties grading 15.76 mi. Route 176, Union to Enoree River; F. A. Proj. 166, 168 Sect. 1, 300 and St. Proj. 774, Bamberg-Orangeburg counties—grading and sand-claying of 15.461 mi. of Route 78, Bamberg to Branchville; F. A. Proj. 293-B-C, Greenwood County, grading 15.418 mi. Route 10, Salak to McCormick County line; St. Proj. 500-A, Horry County, grading 17.9 mi. Route 40, from Route 38 to Green Sea.

Tennessee—Department of Highways and Public Works, Nashville, receives bids July 18 for following roads: Marion County—St. Aid Proj. 137-C-S, 170-C-S, Fed. Aid, Proj. 240-A, paving approach to bridge over Battle Creek near Kimball, approaches to bridge at Jasper on 1.072 mi. St. Hwy. 27, and paving on 10.440 mi. St. Hwy. between Dove and St. Hwy. 27; Madison Co.—Fed. Aid Proj. 235-A, paving, 8.278 mi. St. Hwy. 20, between St. Hwy. 1 and Henderson county line; Williamson Co.—Fed. Aid Proj. 236-C, paving 11.233 mi. St. Hwy. No. 100, between Hickman and Davidson county lines; Polk Co.—St. Aid Proj. 301-C—grading and drainage 7 mi. St. Hwy. 74, at Rock Creek; Sequatchie Co.—St. Aid Urop. 350-A, grading

and drainage 6 mi. St. Hwy. 113, between Hamilton County line and Anderson's Gap; Macon Co.—St. Aid Proj. 551-A, grading and drainage 3 mi. St. Hwy. 51 between Meadowville and Lafayette.

Tenn., Chattanooga—City, E. D. Bass, Mayor, plans widening Second St.

Tenn., Dandridge—Jefferson County Court contemplates \$100,000 bonds for roads.

Tenn., Nashville—Davidson County Highway Comsn. requested County Comsn. to authorize \$170,000 for roads, divided into \$50,000 for pike maintenance; \$50,000 for district road maintenance; \$70,000 for pike construction.

Tenn., Nashville—Dept. of Highways and Public Works opens bids Aug. 1 for 6 grading and draining projects: Fed. Aid No. 236-B (Bridges), Hickman County, conc. bridge and approaches over Cane Creek; State Aid No. 382-E, Robertson County, 4.6 mi. highway 11, between Cedar Hill and Adams; St. Aid No. 504-B, Cocke County, 12 mi. State Hwy. 75, between Cosby and North Carolina line; State Aid No. 534-C, Chester County, 12.7 mi. State Hwy. 100, between Henderson and Henderson County line; State Aid No. 543-C, Coffee County, 10.5 mi. State Hwy. 53, between Manchester and Cannon County line; State Aid No. 545-A, Davidson County, 6 mi. State Hwy. 106, between Williamson County line and Nashville.

Texas—State Highway Dept., Austin, probably let contract July 30 or 31 for projects on Humble Road to cost about \$1,000,000; from Green's Bayou Bridge to county line, including \$225,000, 1700-ft. bridge over San Jacinto River, and smaller structures; grading and drainage structures from Humble-Westfield road to Montgomery county line.

Texas—State Highway Comsn., R. S. Sterling, Chmn., Austin, probably take bids July 31 on grading and draining on following: Wilbarger County—Proj. 928-C, 20.982 mi. Hwy. 23, Vernon to Baylor County line; Tarrant County—Proj. 774-R, 1.336 mi. Hwy. 121, Tarrant to Denton Co. line; Proj. 591-C, 9.021 mi. Hwy. 10, Keller south; Leon Co.—Proj. 582-A, 12.453 mi. Hwy. 43, from Hwy. 32 south; 582-B, 12.656 mi. Hwy. 43, Navasota River north; Caldwell Co.—Proj. 932-A, 3.873 mi. Hwy. 29, point near Luling to Hwy. 9-A; Victoria Co.—Proj. 508-A, 14.763 mi.

Tex., Beaumont—City Comsn. sell \$4,890,000 bonds, including amount for street opening; plans paving Avenue D, Callego to Washington Blvd.; Harrison, First Seventh; Long, First to Seventh; Inth, Harrison to Laurel.

Tex., Beaumont—City, R. C. Black, Engr., probably award contract to Scott Shambaugh Co., 14401 Dowling St., Houston, for paving and sewer work to cost \$125,000.

Tex., Benchley—State Highway Dept., Austin, will improve old San Antonio road, Benchley to Normangee; \$10,000 appropriated; also appropriated \$10,660 for steel span to replace wood span of Pitts Bridge over Brazos River.

Tex., Brackettville—City receives bids Aug. 11 for paving Spring St., including culverts and a bridge over Las Moras Creek; E. P. Arneson, Engr., Gunter Bldg., San Antonio.

Tex., Canton—Van Zandt County, S. L. West, Judre, award contract within 30 days through State Highway Dept., Austin, for grading, draining and bridge work on highway from Grand Saline east; also soon let contract for grading and drainage on road, Canton to Willis Point.

Tex., Canyon—City Comsn. probably let contract to C. N. Harrison for 3-in. vertical fibre brick paving on natural foundation; \$32,265.

Tex., Dallas—City Plan Comsn. recommended that 14 streets be opened or widened; John M. Young, City Engr.

Tex., Dallas—Dallas County Comms. Court receives bids July 21 for grading, drainage structures and 20-ft. conc. pavement, Lawn View Extension Rd., Parkadel to Forney Ave.; receives bids July 28 for paving Unit 3, Buckner Blvd., Garland Rd. to line between Comms. Dist. Nos. 1 and 2, distance of 5,500 ft., and for graveling road along Comms. Dist. line from Buckner Blvd., southwest to road around White Rock Lake; plans from Rollings & Clinger, Dist. Engrs., Records Bldg.; Charles E. Gross, County Auditor.

Tex., Dallas—City Comsn. plans widening N. Ervay St. to 60 ft.; \$395,157.

Tex., Fort Worth—City Council has authorized purchase of right-of-way for Daggett Street Extension to connect with Stove Foundry Road; \$40,000; city also to widen Henderson St., O. E. Carr, Mgr.

Tex., Houston—City, J. M. Nagle, Engr., and Harris County, Charley Halle, Engr., readvertise for bids to pave Washington Ave.; also for new proposals on paving Yale St.

Tex., Keller—State Highway Department, Austin, has plans for drainage on nine miles of Highway 10, north of the Keller cardinal.

Tex., Memphis—Hall County Comms. Court, A. C. Hoffman, Judge, receiving bids for grading and bridges on .714 mi. of highway.

Tex., Mineola—City Council, Jon Russell, Mayor, contemplates paving 15 blocks in Business Belt; plans perfected for paving Pacific St. north and south through city; Alvin Flint, Commr.

Tex., San Antonio—City Comsn. authorized advertising for bids to pave N. Alamo Street extension, Appler St. to Broadway; authorized paving of extension of Fredericksburg Road, Five Points to West Cypress St.

Tex., San Antonio—City, James Simpson, Clk., receives bids July 21 for improving N. Alamo St., Appler St. to Broadway.

Tex., San Antonio—City Comsn. considering street improvements; Harland Bartholomew and Associates, Engrs., 317 N. 11th St., St. Louis, Mo., submitted plans.

Virginia—State Department of Highways, Richmond, has net low bid at \$18,291 from Starkweather Contracting Co., Crozet, for .616 mi. paving in Facquier & Culpeper counties; Route 32, Proj. S184E.

Virginia—Department of Highways, Richmond, receives bids July 22 for 5 roads: Proj. F435A1 and 8537, 4 mi. macadam, Route 23 and 316, Giles County; Proj. S642AB123 7.5 mi. grading and draining, Route 800, Highland County; Proj. S651AD, 10 mi. grading and draining, Route 502, Princess Anne County; Proj. S656, 9.6 mi. grading and draining, Route 607, Northumberland County; Proj. S590CB1, 11.7 mi. soil, Route 306, Appomattox County; receives bids July 29 for Proj. S622A, 4.8 mi. soil, Route 19, Fluvanna County.

Virginia—Department of Highways, Richmond, received following net low bids: at \$16,993 from Jim Frank, Clinchport, Proj. S598A, 1.245 mi.; grading and drainage, Route 26, Garyson County; at \$57,171 from Puffinberger & Mause, Myersville, Md., Proj. S643A, 2.378 mi. one course macad. road, Route 54, Clarke County.

Va., Bedford—Department of Highways, Richmond, improve State Route 104 within city limits of Bedford; hard-surface 4 mi. road between Marion and Sugar Grove, probably in summer 1931.

Va., Roanoke—State Department of Highways, Richmond, started work on widening and straightening Williamson Road approach to Roanoke; \$100,000.

Va., University—State Department of Highways, Richmond, construct half-mile road connecting Jefferson Highway and Seminole Trail.

W. Va., Clarksburg—City plans relocating and improving Clarksburg-Weston pike at Milford St. and North Ave., Stealey Heights.

W. Va., Charleston—Kanawha County Court let contract at \$117,069 to Brown and Floyd, Lowenstein Bldg., Charleston, for 5½ mi. conc. paving on Cabin Creek Rd., between Giles and Leewood.

#### Contracts Awarded

Ark., Fort Smith—City Comsn. let contract to McEachin and Luke, Home Insurance Bldg., Little Rock., at \$13,021, for paving 8 blocks on N. 33rd St., between Grand Ave. and North I St.

D. C., Washington—District Commissioners let contracts for street and road work aggregating \$1,375,385: to Union Paving Co., Broad and Stiles St., \$164,882, for asphalt paving, and \$217,801 for curbs and gutters; Elkins Paving & Construction Co., 836 N. Holly St., both Philadelphia, Pa., \$173,560, for conc. roadways; W. F. Brenizer, South Capitol and Pennsylvania Ave., \$160,384, for conc. roadways; Highway Engineering & Construction Co., Seventh and T St. N. E., \$243,003, curbs and gutters; the Cranford Co., 3056 K St. N. W., \$86,994, resurfacing asphalt streets; Corson & Gruman, 33rd and K St. N. W., \$328,760, resurfacing roadways by replacement.

Fla., Panama City—State Road Department, Tallahassee, let contract at \$2,960,375, to Marianna Lime Products Co., Marianna, for paving 20.43 mi. Road No. 20, Bayou George to pavement in Jackson County, between Panama City and Cottondale; Florida Limerock base.



Ga., Brunswick—City let contract for 7000 yds. asphaltic conc. on lime rock base to Langston Construction Co., Pinecastle Road, Orlando, Fla., at \$19,000; E. V. Camp & Associates 215 Marland Ave., N. E., Atlanta, Engrs.

Ga., Lafayette—Constructing Quartermaster, Fort Oglethorpe, let contract for grading and paving Lafayette Road, at \$386,001, to Brown Contracting Co., 706 Manning St., Chattanooga, Tenn. 6-12

Kentucky—State Highway Comsn., Frankfort, let contract at \$125,281 to N. E. Stone Co., Madisonville, for conc. paving on 6.4 mi. of Fulton-Bardwell Rd., Hickman county.

Ky., Henderson—City, W. G. Schoepflin, Clk., let contract to Premier Construction Co., Indianapolis, Ind., for warrentite bithulithic paving on 6-in. conc. base, and probably contract for 16 more blocks this year; Newton W. Neel, Engr.; Harry E. Jones, Commr.

La., Jonesboro—Town let contract to Vinson Bros., Hattiesburg, Miss., sidewalks on north side of town; \$10,000.

Md., Baltimore—Bd. of Awards let contract at \$19,355, to Arundel Construction Co., Trinity and Albemarle Sts., for paving 6 streets in Contr. 354; 8850 yds. conc., 5650 lin. ft. conc. curbing, 3450 yd. grading; Nathan L. Smith, Highways Engr. 6-19

Miss., Hazlehurst—Board of Aldermen let contract to Cobb Bros. Construction Co. for curbs, paving and street improvement project No. 18.

Miss., Holly Springs—Board of Aldermen let contract to J. P. Rowan for conc. paving, curb and gutter; drains.

Miss., Kosciusko—Attala County Road Comms. let contracts for hauling and spreading gravel on 36 mi. of roads to: Clyde Hester, Lampton Bldg., and J. M. Sanders, Jackson; Van Rainey and A. L. Allen; A. H. O'Brian and O. E. Mangum, 215 W. Elm St., Jackson, and Brown Contracting Co.

Miss., Oxford—Lafayette County Board of Supervisors let contract at \$18,332 to E. E. Murray for 1.687 Wyatt's crossing road; also for 3.442 mi. College Hill spur, from west of Oxford to College Hill.

Miss., Yazoo City—City Council let contract at \$282,000 to Wright Construction Co., 3001 Fifth St., Meridian, for natural lake sheet asphalt, on conc. base.

Miss., Walthall—Webster County Bd. of Supvrs. let contract to Shruptine & Son, Comer Bldg., Birmingham, Ala., to gravel 43 mi. of roads; gravel from Waters & McCrary, Columbus.

Okla., Oklahoma City—City, E. M. Fry, Mgr., let contract to Western Paving Co., Petroleum Bldg., to pave West 21st St., near Gatewood Ave.

South Carolina—State Highway Commission, C. D. Jones, Chmn., Columbia, contracted for 2,750,000 barrels of cement in connection with the \$65,000,000 road building program; at \$2.40 per barrel with Carolina Portland Cement Co., 1 Broad St., Charleston, 500,000 barrels to be delivered up to Dec. 31, 1931, with option on 500,000 additional barrels to be delivered in 1932; with Lehigh Portland Cement Co., Bankers Bond Bldg., Birmingham, Ala., for 225,000 to 300,000 barrels for use on projects in Orangeburg, Calhoun, Spartanburg and Abbeville counties, at net price of \$2.05 per barrel based on Charleston delivery; with National Cement Co., Brown-Marx Bldg., Birmingham, for 350,000 barrels to be delivered to June 30, 1931; with Lone Star Cement Co., Comer Bldg., Birmingham, for 300,000 to 500,000 barrels of cement up to Dec. 31, 1931; with Pennsylvania-Dixie Cement Corp., James Bldg., Chattanooga, Tenn., for 300,000 to 600,000 barrels up to Dec. 31, 1931; with Signal Mountain Portland Cement Co., Luck Creek Road, Chattanooga, for from 250,000 to 500,000 barrels up to Dec. 31, 1931.

South Carolina—State Highway Comsn., Columbia, let following contracts for work, bids received June 24: Chesterfield County—Proj. 291-E, Small & Triplett, Bethune, \$56,565; 714-A & B, Jamison Bros., Nashville, Tenn., \$150,535; 291-B, Paul Gilmore, Airport Road, Spartanburg, \$944; 291-C, Small & Triplett, Emaxcee Bldg., Greenville, \$25,639; 291-D, same contractor; Edgefield County—Proj. 230-B Ext., Claussen-Lawrence Construction Co., 1304 Gwinnett St., Augusta, Ga., \$3325; Lee County—Proj. 238, Wannamaker & Wells, Orangeburg, \$7383; Spartan-

burg County—Proj. 633-B, Geo. A. Thomason & Son, Macon, Ga., \$27,096; Clarendon County—D. M. Rickenbaker, Union, \$34,344; Aiken County—Proj. 37-A, R. M. Mitchum, 1231 Belmont Drive, Augusta, Ga., \$5,766; 522, same contractor \$19,309; 700, R. G. Kennedy, Batesburg, \$24,025; Berkeley County—Proj. 686-A, H. M. Taylor, Ridgeland, \$29,023; Cherokee County—Proj. 294-A, Jamison Bros., \$40,203; Fairfield County, Proj. 126, Newell Contracting Co., Wallace Bldg., Greenville, \$38,844; 759, Wilson Construction Co., Technical Bldg., Asheville, N. C., \$65,000; Laurens County—Proj. 298, Jamison Bros., \$75,143; McCormick County—Proj. 744-A, Smith & Bradfield, Macon, Ga., \$72,283; Newberry County—Proj. 620-B and 747, Harrison-Wright Co., 4 W. Third St., Charlotte, N. C., \$41,835; 688, S. M. Cooper & Son, Nienty Six, S. C., \$28,443; Oconee County—Proj. 640-B, C. M. Lyle Construction Co., Gainesville, Ga., \$76,648; Union County—Proj. 738-B, Carroll-Subor Construction Co., Newberry, S. C., \$53,048; Williamsburg County—Proj. 296 and 741, Sanford & Brooks Co., Peoples Bldg., Charleston, \$94,711; Lancaster County—Proj. 689-A & B, A. S. Barron, Lancaster, \$61,363; Florence County—Proj. 771, Austin Brothers Bridge Co., 1195 Mickleberry St., S. W., Atlanta, Ga., \$10,031; Marion County—Proj. 740, (overhead) Gaudin Brothers, Spartanburg, \$13,906 and L. Riddle, 85 Olney Road, West, Asheville, N. C., \$10,714; 740-D, J. B. Britton, Sumter, \$7760; Harry County—Proj. 764, Florida Bridge & Construction Co., 49 Lorna Doone Blvd., Orlando, Fla., \$10,676; Chester-Fairfield Counties—Proj. 235-G-A-C-E, Contr. 2 and 553, 646-A-B-C & 759 Contr. 2, \$234,148; Lancaster County—Proj. 555 Contr. 2, \$41,261; Oconee County—Proj. 640-A Contr. 2, \$59,120; Orangeburg-Bamberg counties—Proj. 589-B-C-D-E Contr. 2, \$95,519, all to Carolina Road Surfacing Co., Capero Bldg., Greenville; Hamberg-colleton-Hampton counties—Proj. (587 & 574) Contr. 2, C. G. Fuller, Barnwell, S. C., \$228,519; Saluda County—Proj. 516 Contr. 2, MacDonald Construction Co., 545 Angier Springs Road, Atlanta, Ga., \$67,606; Lexington-Saluda-Newberry counties—Proj. 520 & 592 Contr. 2, same contractor, \$74,244. 6-12

Tex., Austin—City Council let contract to Southwest Bitulithic Co., Littlefield Bldg., for bitulithic paving on conc. base with gutter sand curbs on 26th St., Guadalupe to Duval and from Speedway to Duval Sts.

Tex., Corpus Christi—Nueces County Comms., Roy Clift, Clerk, let road contracts totaling \$328,737; to Cage Brothers, for Flour Bluff Rd., \$46,631; Sunshine Rd., \$8211; Dump Rd., \$31,012; Alta Vista Rd., \$20,587; old Brownsville Rd., \$16,272; to E. G. Castleberry, 720 Sam Rankin St., work on Five Points and McKinzie roads, \$14,701 and \$11,205; Savage Rd., \$4456; Leopard St. extension \$4456; to G. H. Dunn & Co., 1319 Fourth St., for Bluntzer-Banquette Rd., \$68,961; to Brown & Root, 1002 Nixon St., for Robstown-Petronilla Rd., \$60,343; to Lanham & Cross, for Augua Dulce north and south roads, \$16,735.

Tex., Galveston—Galveston County Comms. let contract at \$15,685 for Texas City-Kemah Rd. and at \$14,385 for S Rd. to N. P. Turner, Marshall.

Tex., Houston—Harris County Comms. Court let contract at \$43,333 for 2-mi. section West Montgomery Road, from Tomball-Waller road to county line, to A. J. Smith, 3217 Inwood Drive.

Tex., Houston—City Council let contract at \$2,584 to Gohar & Thompson, 316½ Polk St., for paving North Commerce St., Third to Fourth and at \$6,864 for W. 10th Ave., to Wilmering & Mullen, 96 Polk St., to pave alley between Fillmore, Pierce, and Third Sts.; to Amarillo Construction Co., 614 Lipscomb St., for West 13th, Tyler to Harrison; also let contract at \$29,918 to Gulf Bitulithic Co., 2820 Polk St., for paving Chartes St., Cleburne to Blodgett; at \$2940 to Griswold Bros., 3840 Polk St., to gravel Chapman St., Morris to Hayes.

Tex., Longview—City Comsn. let contract at \$139,327 to P. F. McElwath Co., Corsicana, for retopping streets in business district with brick and in residential area with concrete; Bill Taylor, City Mgr.

Tex., Nacogdoches—Board of Regents, Stephen F. Austin, Teachers College, let contract at \$28,000 to T. L. James Co., Ruston, La., for asphaltic conc. paving on streets and drives in campus; 17,500 sq. yds., 27 ft. wide; Lamar Acker, Engr.

Tex., Point Isabel—R. W. Briggs & Co., Pharr, have contract for paving 12 remaining miles on Highway 100. Point Isabel to Los Fresnos; for Cameron County.

Tex., Slaton—State Highway Department, Austin, approved supplemental contract with J. W. Zempter Co., Fishe M. & P. Bldg., Amarillo, for 20-ft. conc. paving on North and South Ninth St. in Slaton; cost to be defrayed by Lubbock County and State.

## Sewer Construction

**Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.**

Ala., Mobile—City Comsn. to consider bond issue for waterworks expansion.

Ark., Clarksville—City, plans \$30,000 sewer extension and \$80,000 water supply system; W. L. Winters, Engr., Merchants Bank Bldg., Fort Smith, Ark. 7-3

Ark., Lewisville—Earl W. Baker & Co., Perrine Bldg., Oklahoma City, Okla., reported, has contract for sewers and water works.

Ga., Athens—City lay sewer system on Ocones and Oak Sts.

Ga., Vienna—See Water Works.

La., Natchitoches—Robert Henry, Natchitoches, has contract for extension and improvements to present power house building. 7-3

La., New Orleans—Scott Shambaugh Co., 1401 Dowling St., Houston, Tex., reported, low bidder for sewer work on Threadneedle St.

Md., Baltimore—D. C. McAleer, Lexington Bldg., has contract at \$30,513 for storm waters sewers, Contr. No. 150; DeCou & Chidlay, Euaw and Biddle Sts., at \$144.55 for sanitary sewers; Ligon & Ligon, 3310 Riderwood Ave., at \$26,817 for laying mains Carnegie Ave.

Mo., St. Louis—Bd. of Public Service receives bids July 29 for section B-6 Western Mill Creek Public Relief sewers.

N. C., Asheville—Bd. of County Comms., F. Q. Boyer, County Engr., advises that contract for Hominy Sewer line is held in abeyance pending a complete survey of sewer situation in this county. 7-10

Okla., Fletcher—Highway Construction Co., Daniels Bldg., Tulsa, reported, has contract at \$36,000 for 19,200 ft. of conc. sanitary sewers.

Okla., Sayre—See Water Works.

S. C., Greenville—City receives bids July 22 for sewers. See Want Section—Bids Asked. 7-3

Tenn., Bruceton—City voted against proposition of Geo. J. Robinson Co., 2700 Linden St., Pine Bluff, Ark., for installing sewer system.

Tenn., Brownsville—City defeated \$120,000 sewer bonds. 6-19

Tenn., Chattanooga—Mark F. Reardon, reported, has contract for Brainerd sewer line, cost \$54,000. 6-19

Tenn., Livingston—City, reported, votes soon on \$60,000 bonds for improvements to water works and distribution system.

Tex., Graham—City, A. B. Eddleman, Mayor, plans addition to sewage disposal plant including settling basin; Hawley, Freese & Nichols, 411 Capps Bldg., Fort Worth, Consult. Engrs.; cost \$20,000.

Tex., Columbus—Kirkwood, Wharton & Lee, 518 N. Flores St., San Antonio, reported, has contract for sewer system and sewage disposal plant.

Tex., Harrisburg, Houston—City has plans and will soon call for bids for storm sewer along Green Blar Drive from University Blvd. to Shakespeare.

Tex., Taylor—City voted \$100,000 bonds for purchase sanitary sewer system from Smith & Hamilton.

Va., Charlottesville—Paul N. Howard, Greensboro Bank & Trust Bldg., Greensboro, N. C., reported, has contract for construction of 2 sewage disposal plants, cost \$63,700. 6-12

Va., Newport News—City, J. C. Biggins, Mgr., reported, closed contract with George W. Fuller, 170 Broadway, New York for survey for sewerage improvements Salter's Creek.

### Telephone Systems

Fla., Miami Beach—Isle of Dreams Broadcasting Co., Station WIOD, Jesse Jay, Mgr., has permit for \$10,000 improvements to station, Collins Island; bldg., steel, conc., stucco, conc. foundation on piling; L. A. Wessel, Gen. Contr., 623 Washington Ave.; Russell T. Pancoast, Designing and Supvg. Archt., 1139 Lincoln Road. 7-3

Fla., Miami—Southern Bell Telephone & Telegraph Co., Hurt Bldg., Atlanta, Ga., Vernon Baird, Dist. Mgr., expend approx. \$669,000 expanding facilities in Florida; includes additional pole lines between Miami and cities of the north.

Fla., Panama City—Southern Bell Telephone Co. extending telephone service, Panama City to Bay Harbor, site of Southern Kraft Corp. plant, involving \$18,000.

Okla., Wapanucka—Southwestern Bell Telephone Co., I. R. Timlin, Archt., Telephone Bldg., St. Louis, Mo., advises bids not expected to be received for telephone building until late in 1930. 7-10

Tenn., Chattanooga—WDOD Broadcasting Corp., chartered; Earl W. Winger, 85 Alta Vista Drive.

Tenn., Paris—Southern Bell Telephone & Telegraph Co., Hurt Bldg., Atlanta, Ga., acquired site for telephone building in connection with contract with City to install flash light system, change to be made effective by Sept. 1, 1931.

Tex., Dallas—Rio Grande Valley Telephone Co. increasing capital, \$500,000 to \$1,000,000.

Tex., San Antonio—Following have sub-contracts in connection with 7-story administration and equipment building of Southwestern Bell Telephone Company, I. R. Timlin, Archt., Telephone Bldg., St. Louis, Mo.: Tile, Trafton Tile & Marble Co., 1212 Main St.; terrazzo, Venice Art Marble Co., San Antonio and Minneapolis, Minn.; McKenzie Construction Co., Gen. Contr., Smith-Young Tower; W. J. Knight & Co., Engrs., Wainwright Bldg., St. Louis, Mo. 7-19

Va., Norfolk—Radio Station WTAR authorized by Federal Radio Commn., Washington, to use portable transmitter in making tests to find suitable location for broadcasting plant outside of city.

### Textile Mills

Ala., Alabama City—Dwight Mfg. Co., reported, let contract to Whitin Machine Works, Whitinsville, Mass., for 62,000 spindles. 7-3

Ala., Decatur—Alabama Hosiery Mills, Sixth Ave. and Eleventh St., reported, plans \$250,000 expansion program, install new equipment and machinery.

Miss., Corinth—J. E. Sirrine & Co., Engrs., 215 S. Main St., Greenville, S. C., preparing plans for hosiery mill, will release to contractors in few days. 7-10

N. C., Charlotte—Ellis Silk Hosiery Co., 512 S. Graham St., reported, plans expending \$120,000 for additional machinery, doubling capacity; manufacture ladies full fashioned rayon hosiery.

S. C., Gaffney—Dr. W. K. Gunter, Mgr. Derry Damask Mills, reported, acquired plant and property of Globe Mfg. Co.

S. C., Whitmire—Southern Public Utilities Co., Charlotte, N. C., reported, acquired lighting system of Whitmire and local plant of Aragon-Baldwin Cotton Mills, Inc.

### Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that classification.

Ark., Clarksville—See Sewer Construction.

Ark., Cotton Plant—Town, reported, interested in installation of water works system.

Ala., Mobile—City Comsn. to consider bond issue for sewer expansion.

Ark., Walnut Ridge—Associated Utilities, Inc., subsidiary of Municipal Telephone & Utilities Co., Kansas City, Mo., reported, acquired city water works; also has franchise at Hoxie to pipe and supply water.

Ga., Vienna—City voted \$15,000 water and sewer bonds; J. B. Ryner, Mayor. 3-6

La., Alexandria—U. S. Veterans Bureau, Arlington Bldg., Washington, D. C., receives

bids July 22 for drilling deep well at Veterans Hospital.

La., Shreveport—W. T. Mayo, Commr. Public Utilities, receives bids July 22 for reinforcing water mains Fairfield Heights and Glen Iris subdivision.

Md., Baltimore—City, Charles F. Goob, City Engr., will expend \$1,000,000 for constructing connection conduit between Druid Hill Lake and Montebello water works; work may begin this summer; date of receiving bids not set.

Md., Baltimore—See Sewer Construction.

Md., Catonsville, Baltimore—Baltimore County Commrs., Towson, will begin work in about 1 month on pumping station; work by county forces; conc. brick building with equipment cost \$20,000; B. E. Croier, Engr., Court House, Towson. 3-20

Md., Cumberland—Tri-State Engineering Co., Liberty Trust Bldg., will complete within 30 days 20-in. water line to plant of Celanese Corp. of America at Amecelle. 3-20

Md., Funkstown—W. C. Pratt, Fredericksburg, Va., reported, has contract at \$14,890 for constructing water system.

Mo., Lamar—City votes July 20 on \$20,000 bonds for filtration plant.

Mo., Cape Girardeau—Missouri Public Utilities Co., subsidiary of Community Power & Light Co., Planters Bldg., St. Louis, reported, soon begin construction of water filter plant, if plans are approved by State Bd. of Health, Jefferson City. 6-19

Mo., Grand View—City, reported, plans water works distributing system; W. B. Rollins & Co., Engrs., 339 Railway Exchange Bldg., Kansas City.

Mo., Hornersville—City, S. A. Shields, Mayor, reported, install water works system; vote soon on bonds.

Mo., Lancaster—City, reported, plans extending distribution system, surface reservoir, filtration plant, pumping equipment, etc.

Mo., St. Louis—Commonwealth Utilities Corp., 1401 Arch St., Philadelphia, Pa., reported, plans improvements to recently acquired property of St. Louis County Water Co. 7-3

Okla., Checotah—City, A. D. Sanders, Mayor, reported, plans \$17,000 artesian water supply.

Okla., Lawton—City, reported, install water works and filtration plant; Burns & McDonnell Eng. Co., Engrs., 400 Interstate Bldg., Kansas City, Mo. 5-1

Okla., Sayre—City plans voting on bonds for water and sewer extension.

Okla., Woodward—City, Malcolm W. McKenzie, reported, plans calling election for water supply improvements.

Tenn., Franklin—W. L. Halley & Co., 314 Forty-second Ave., N., Nashville, reported, low bidder for water works addition; Marr & Holman, Engrs., Stahlman Bldg., Nashville.

Tenn., Johnson City—City, W. B. Ellison, Mayor, soon call for bids for 1,000,000 gal. steel tank to be used as water reservoir; cost \$15,000; later plan rebuilding present reservoir of 2,200,000 gal. 5-22

Tex., Kemah—W. F. Hepworth, has franchise to supply water from artesian wells.

Tex., Dallas—Dallas County Commrs. Court, reported, ordered election Aug. 2 to vote on forming fresh water district within Preston Rd. development to serve that section.

Tex., Harrisburg, Houston—Ed. S. McFarland, has contract at \$11,331 for construction of water main to connect Harrisburg and Park Place with new East End water plant.

W. Va., Grafton—City, reported, plans water main improvements.

W. Va., Logan—National Water Works Corp., 11 Broadway, New York, reported, acquired property and franchise of Logan Water Works Co. and Pure Water Works Co.; will be known as Pure Water Works Co.; serve Logan, Holden, Gay, Aracoma, Cherry Tree Bottom, and other communities.

### Woodworking Plants

Ala., Birmingham—Birmingham Auto & Machine Co., 2330 Second Ave., S., plans installing additional machinery to manufacture tool handles.

Ky., Louisville—Wood-Mosaic Co., Highland Park, hardwood and cabinet manufacturer, has permit for \$15,000 warehouse, 5001 Crittenden Dr.; 160x180 ft., frame, conc. 7-10

### FIRE DAMAGE

Ala., Andalusia—Shine's Warehouse; general stores of Matterson and Wiggins and Adams Warehouse; loss \$10,000.

Ala., Birmingham—Blackmon Produce Co.'s building, 2122 Morris Ave.; loss \$10,000.

Ala., Gadsden—Material warehouse at the plant of Gulf States Steel Co., Brown-Marx Bldg., Birmingham, loss \$10,000; Waste paper baling shed of Goodyear Tire & Rubber Co., Gadsden, and Akron, Ohio.

Ark., Bella Vista, Bentonville—Pavilion of Ozark Resort, operated by Linebarger Brothers; loss \$15,000.

Ark., Grandview—Postoffice Bldg., Mrs. Nannie Foreman, Postmistress; J. T. Miller's warehouse.

Ark., Havana—Plant of Mount Magazine Rural Record, weekly newspaper; loss \$12,000.

Ark., Imboden—L. H. Kaiser's dwelling; loss \$12,000.

Ga., Atlanta—Freight office building of Atlanta, Birmingham and Coast R. R.; J. M. Cowart, Engr.; loss \$50,000.

Ga., Augusta—C. C. Farr's clothing store, 958 Broad St.; loss \$16,000.

Ga., Smithville—Smithville Consolidated School; address School Bd.

Ky., Germantown—Germantown Mercantile Co.'s store; Kennedy & Galbreath Tobacco Planter Co.'s building; loss \$50,000.

Ky., Jeffersonville—Clifford Bensinger Furniture Co.'s store, 231 Spring St.; loss \$70,000.

Ky., Louisville—Stiglitz Furnace Co.'s bldg., W. Main St.; loss \$45,000.

Ky., Louisville—Anderson Mfg. Co.'s lumber sheds, Garden and Chestnut St.

La., Cotton Valley—Molton Bldg.; R. L. Holloway's home; Clifton Yakes Bldg.; M. C. Logan Bldg.; Coyle Bldg.; Raymond Coyle Electric Shop; Alvin Roby's store; Meek Motor Co.'s building; Masonic Hall; Shuff Grocery Co.'s building; Graham Dry Goods Co.'s store; Gent Cox Grocery Co.'s building; U. Neda Shoe Shop; Jones Meat Market; loss \$100,000.

Md., Baltimore—Plant of Baltimore Pants Co., 508 S. Ann St., Ellis Epstein, Pres., 4017 Park Heights Ave.

Miss., Tchula—Tchula Motor Co.'s building equipment, etc.; loss \$50,000; Steele Crow, Mgr.

Mo., Sikeston—Storage sheds of Sikeston Milling Co.; loss \$50,000.

Mo., Richland—O. H. Davis Grocery; Richland Mirror Co.'s plant; E. K. Morgan Hardware Co.'s building; J. A. Tanner's store; B. Teeple Furniture Shop; loss \$75,000.

N. C., Charlotte—Belk Brothers' Dept. Store, 23 E. Trade St.; loss \$100,000.

Tenn., Knoxville—Smithwood Garage, Smithwood, and bldg. of Cozart Estate; loss \$10,000.

Tenn., Nashville—Batchelor Motor Co.'s bldg., 519 Broad St.; loss \$10,000; W. P. Webb, Estate, owner.

Tex., Jefferson—Ware & Driskill's lumber mill, 8 mi. from here.

Tex., Red Rock—J. L. Willbarger's lumber yard; loss \$20,000.

Tex., San Antonio—P. Viola's print shop, 1520 W. Martin St.

Tex., Spofford—School building and J. N. Forister's residence.

Va., Mendota—Baptist Church and parsonage; C. C. Johnson's residence; loss \$15,000.

Va., Rocky Mount—Turner Motor Co. garage; R. F. Rakes, Owner.



# BUILDING NEWS

## BUILDINGS PROPOSED

### Association and Fraternal

Ga., Macon—Al Sihab Temple, A. A. O. N. M. S., C. A. McAlister, 312 Adams St., member, opens bids July 24 for \$75,000 shrine temple; 119x82 ft., 2 story, basement, rein. conc., struc. steel, brick, hollow tile, Indiana limestone, alternate on east stone and terra cotta, Georgia granite, cement, tile and terrazzo floors, steel sash, built-up roof; following estimating on general contract: D. W. Griffin, M. E. Shaw Construction Co., 1605 Vineville Ave.; R. H. Smallings Sons, Fourth Natl Bank Bldg.; Chess W. Jones; W. A. Stillwell & Sons, both Grand Bldg.; W. Elliott Dunwoody, Archt., 460 Mulberry St.; Joseph S. Shaw, Engr., Georgia Savings Bank Bldg., Atlanta. 6-12

Ga., Valdosta—Valdosta Post No. 13, American Legion, Dr. E. H. Anderson, Commander, ready for bids about Sept. 1 for \$15,000 club house; brick, frame; Lloyd Greer, Archt. 3-6

Tex., Dallas—Y. M. C. A., Edw. Moore, Chmn., Bldg. Comm., plans to call for bids soon for \$800,000, 12-story building, Ervay St. between Patterson Ave. and San Jacinto Sts.; brick, stone, steel and rein. conc.; outdoor gymnasium 52x130 ft.; Anton F. Korn, Archt., Thomas Bldg. 3-6

Va., Bedford—Elks National Home, Clyde Jennings, Chmn., Bd. of Trustees, soon let contract for 120-room dormitory; Clark & Crowe, Archts., Krise Bldg., Lynchburg.

### Bank and Office

Ark., Little Rock—Little Rock Real Estate Bd., W. S. Daniel, Pres., 1801 N. Monroe St., appointed committee, to negotiate for site on which to erect building, consisting of A. L. Wooten, 118 E. Tenth St., W. S. Holt, 213½ W. Second St., and others.

D. C., Washington—American Red Cross probably have plans complete in 3 months for office bldg., 18th and E St.; struc. steel, rein. conc., marble exterior, approx. 60x225 ft., 6 story, including basement; Trowbridge & Livingston, Archt., 527 Fifth Ave., New York; bids to be advertised for and let under direction of Office of Public Buildings and Public Parks of National Capital, Col. U. S. Grant, III, Director.

Ga., Valdosta—R. E. Spaulding Co., R. E. Spaulding, Pres., interested in erecting \$200,000, 7-story office bldg.; 2 sites under consideration; construction to start in few days.

Tex., Eagle Pass—First National Bank, Geo. Hollis, Pres., remodel and erect addition to bldg.; \$50,000; brick, conc., steel, 2 story; P. G. Silber & Co., Archts., Bedell Bldg.; Matthews & Kenan, Engrs., Smith-Young Tower, both San Antonio; bids in. 7-10

Tex., New Braunfels—First National Bank, Walter Faust, has plans complete, soon call for bids for \$60,000 bldg., fixtures and vault, \$20,000; 1-story with provision for 5 additional stories, approx. 50x80 ft., brick, stone, rein. conc.; Giesecke & Harris, Archt., Norwood Bldg., Austin; Jeremiah Schmidt, Asso. Archt., New Braunfels. 6-12

Tex., Tyler—T. E. Swann having plans drawn, start erecting 5-story office bldg., N. Broadway, within about 30 days.

Va., Bedford—Citizens National Bank remodel building, Recently incorrectly reported as Ga., Bedford. 7-3

Va., Norfolk—Virginia Electric & Power Co., 200 E. Plume St., R. J. Throckmorton, V.-P., has low bid at \$281,840 from W. W. Thompson, Inc., 857 W. 46th St., for 6-story, 75x116 ft., steel rein. conc., brick and terra cotta office building; Calrow, Browne & FitzGibbon, Archts., Royster Bldg. 7-3

### Churches

Ark., Little Rock—First Methodist Episcopal Church, South, W. C. Martin, Pastor, Eighth and Center Sts., expend approx. \$30,000 for improvements, consisting of \$15,000 pipe organ, redecorating interior of main auditorium, lighting system.

Ga., Atlanta—Emory University has low bid from Norwood Griffin, Bona Allen Bldg., for church; soon let contract; Hentz, Adler & Shutze, Archts., Candler Bldg. 6-5

Ga., Moultrie—Presbyterian Church having plans completed for Sunday school bldg., annex; T. Firth Lockwood, Archt., Murrah Bldg., Columbus. 6-5

Ky., Covington—Methodist Episcopal Church, 10th and Russell Sts., reported, soon let contract for \$200,000, 2-story, brick and stone building, Madison St.; plans by Bureau of Architecture, 1701 Arch St., Philadelphia, Pa.

La., Abbeville—First Methodist Episcopal Church having plans prepared by Owen J. Southwell, 199 Powers Ferry Road, Atlanta, Ga., for rein. conc., brick and stucco, fireproof church and separate Sunday school.

La., Shreveport—Church of Christ Scientist, S. P. Weaver, Chmn., Bldg. Comm., 908 Erie St., selected M. D. Weeks, Gliddens-Lane Bldg., to prepare plans for \$50,000, 2-story and basement, brick, stone trim building; auditorium to seat 400; ready for bids about Aug. 1. 5-1

Mo., St. Louis—Nelson Memorial Presbyterian Church, Rev. Lackland Feeding, Pastor, Pine Lawn, acquired site, Manola Blvd. and Natural Bridge Rd., start erecting \$25,000 chapel, first unit of church at once; seat 5000; later erect auditorium to cost \$75,000.

N. C., Winston-Salem—George W. Lee Memorial Presbyterian Church, Rev. Charles E. Clark, Pastor, plans \$100,000 church at Patterson Ave. and 15th St.; brick and steel, fireproof; main auditorium 50x60 ft., seat 700 people; Sunday school section to be 3 stories and basement.

Okla., Tulsa—University Methodist Church, Rev. Vache A. Hargis, Pastor, ready for bids about August 1 for \$200,000 Gothic type building, College Avenue and Fifth St.; rock walls, limestone face, L-shape, steel frame, 2 story, basement, 140x150 ft., sent 1100, 9 stained glass windows; Chas. A. Popkin, Archt., Commercial Bldg. 7-17

Okla., Tulsa—Glennwood Baptist Congregation, L. E. Leeper, Glenn Station, in charge, having plans drawn for \$50,000 bldg.; 2 story, brick, tile.

Tex., Abilene—Roman Catholic Church has plans complete for church and rectory; auditorium to seat 500, brick, stone, conc., Moorish type; rectory 7 rooms, brick, conc.; total cost \$57,000; Leo M. J. Dielmann, Archt., 306 E. Commerce St., San Antonio. 5-13

Tex., Dallas—Emanuel Lutheran Church, Rev. Reuben Spong, Pastor, Church, Peak and San Jacinto Sts., plans \$25,000 church building; B. C. Voigt, Archt.

Tex., Liberty—Methodist Church, J. F. Richardson, Chmn., Bldg. Committee, Rev. D. S. Hotchkiss, Pastor, erect bldg.; Tom Day, Dayton, has contract for removing present bldg.; bids in.

Tex., Yorktown—Lutheran Church, Rev. Mr. Handkammer, Pastor, erect \$50,000 church bldg., with auditorium to seat 500 to 700; brick, rein. conc.; Marvin Eickenroht & Bartlett Cocke, Archts., Maverick Bldg.; Beretta-Stiles Co., Inc., Engr., Natl. Bank of Commerce Bldg., both San Antonio; bids in July 22. 6-12

Va., Richmond—Barton Heights Methodist Church, Rev. J. Calloway Robertson, Pastor, H. G. Robelen, 10 W. Lancaster Road, Chmn., Bldg. Fund Comm., authorized Luther P. Hartsock, Archt., American Natl. Bk. Bldg., to draw plans for auditorium, Garland Ave. and Norwood St., to be erected in early fall; cream brick. 4-3

Va., Williamsburg—Presbyterian Church erect bldg., Richmond Rd. opposite W. & M. College; include auditorium seating 200, educational and social rooms, Colonial type.

### City and County

Ala., Montgomery—City, W. A. Gunter, Mayor, probably erect auditorium, Washington and Lawrence St.

Fla., Inverness—Jules Breuchand, New York, offered to establish \$100,000 fund for public library in city.

La., Cameron—Cameron Parish defeated \$125,000 bonds for courthouse and jail. 5-29

La., Mansfield—DeSoto Parish Police Jury, G. Williams Wharton, Sec., receives bids Aug.

6 for repairing jail as follows: (1) New roof; (2) plumbing repairs; (3) general inside and outside repairs; plans at office Mr. Wharton.

Miss., Bay St. Louis—City, Chas. Taub, Sr., Mayor, opens bids July 21 for painting and repairing city hall bldg.; plans, Office of Mayor.

Okla., Carnegie—City erect city hall and fire station; 1 story, 50x60 ft., includes accommodations for 2 fire trucks, dormitory for firemen, 3-cell jail, council chamber, etc.; \$65,000; E. H. Eads & Co., Archts., Chickasha; bids in.

Okla., Muskogee—City, W. H. Cavanaugh, Clk., soon call bids for city hall bldg.; 3 story, 140x202 ft., brick, rein. conc. and stone, wood, cement, tile and terrazzo floor; Layton, Hicks & Forsythe, Archts., Braniff Bldg., Oklahoma City; L. L. Howenstine, Manhattan Bldg., and H. H. Nieman, Barnes Bldg., Asso. Archts. 1-30

Okla., Oklahoma City—City, M. Peshek, Jr., Clk., W. W. Small, City Engr., soon call \$1,500,000 bond election; \$180,000 for fire station; city detention hospital, \$250,000; comfort stations, \$60,000.

Tenn., Chattanooga—City, Jas. A. Cash, Commr., has low bid from Young & Jones at \$7958 for Missionary Ridge fire hall addition; J. G. Gauntt, Archt., Hamilton National Bank Bldg.

Tenn., Newport—Cocke County Court, R. P. Campbell, Chmn., authorized Bldg. Committee to expend \$100,000 for courthouse and equipment, Main and Church Sts.; 3 story, brick, terra cotta trim, accommodate approx. 100; Manley & Young, Archts., Maplehurst Park, Knoxville. 6-5

S. C., Seneca—City Council soon select site for city hall; plans include general office, fireproof vault, council hall and police court room, fire department, sleeping quarters for firemen.

Tex., Runge—City, R. L. Reuser, Secy., has low bid from Otto Glips, Yorktown, at \$10,959, for city hall; Will Noonan Co., Archt., Bldrs. Exch. Bldg., San Antonio. 7-3

### Dwellings

D. C., Washington—M. & R. P. Warren, 925 15th St., N. W., acquired 70-acre tract between Chevy Chase and Columbia Country Clubs, to be known as Meadowbrook; grading practically complete on first tract to contain about 58 homes, 4 homes nearing completion; 6 rooms, 2 baths, built-in 2-car garages, electric refrigeration; David J. Howell & Son, Engrs., Union Trust Bldg.; Parks & Baxter, Archts., 1501 Connecticut Ave., N. W.; John H. Small, III, Landscape Archt., Architects Bldg.

Ky., Louisville—Harry Boone, Pres., Porter Paint Co., 101 W. Market St., erect \$25,000 residence on Finca Farm; 153x50 ft.; Nevin, Morgan & Kolbrook, Archts., Starks Bldg.

Ky., Louisville—Mrs. Frances Mooney erect \$30,000, five-room residence on Casselberry Road in Cherokee Village; Webb-Clark Co., Archts., Theater Bldg.

Ky., Louisville—Mrs. J. L. Duncan, 2725 Field St., erect \$15,000, 4-room residence in Cherokee Gardens; Herman Wischmeyer, Archt., Heyburn Bldg.

La., New Orleans—Mrs. E. F. Dantoni erect \$15,000 residence and garage, Palmer Ave. between Cromwell Place and Calhoun St.; Weiss, Dreyfous & Seiferth, Archts., Maison Blanche Bldg.

La., New Orleans—John Fabacher, 470 Fairway Drive, erect \$13,000 frame and stucco residence and garage, Metairie Ridge Road between Melaire Road and Parish line; tile roof; Weiss, Dreyfous & Seiferth, Archts., Maison Blanche Bldg.

Md., Baltimore—Windsor Building Co. erect 5, 2-story, brick dwellings, 1810-18 Ellemont St.; 18x32 ft., hot-water heat; \$15,000.

Md., Baltimore—E. J. McGraw, 306 Turnbridge Road, erect \$10,000 stone dwelling, 235 Chancery Rd.

Md., Baltimore—E. J. Gallagher Realty Co., 3501 Ednor Road, erect seven 2-story brick dwellings, 3700-12 Kemble Rd.; \$35,000.

Md., Baltimore—Theo. E. Rupp, 2826 Pressman St., erect 3-room bungalow, 529 Overbrook Road, Anneslie.

Miss., Jackson—W. H. Lane, Pocahontas St., erect residence; 7-room, brick veneer, tile roof, rein. conc. foundation, steam heat; Claude H. Lindsley, Archt., Jackson Tower Bldg.; bids in.

Tex., Brownsville—W. E. McDaviss has plans in progress to be complete about Aug. 1 for residence; 2 story, struc. clay tile, stucco, rein. conc. foundation, Spanish type; R. Newell Waters, Archt., Weslaco.

Tex., Dallas—W. W. Overton, Mercantile Bank Bldg., has permit for \$11,000 residence; 8 rooms, brick veneer.

Tex., San Antonio—Lewis Kayton, 320 Madison St., has low bid from W. H. Carrington, 2747 E. Houston St., at \$12,900, for residence, Elsmere and Howard St.; 2 story, brick veneer, 48x55; Richard Vander Straten, Archt., Travis Bldg. 7-3

Tex., San Antonio—Albert Kronkosky, Charles Graebner, Frost Bank Bldg., both San Antonio, and Dr. J. F. Nooe, Boerne, erect residences, Nogalitos Heights, South Side subdivision.

### Government and State

Ala., Union Springs—Following contractors estimating on \$50,000, 2-story and basement post office, bids July 29 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; Upchurch Construction Co., Evergreen, Ala.; A. J. Honeycutt Co., 2512 Eighth Court St., Birmingham; Samford Brothers, Inc., 301 Washington Ave., Montgomery, Ala.; Fanning & Sweeney, Inc., Jefferson Bldg., Greensboro, N. C. 7-10

Ga., Fort Benning—Constructing Quartermaster opens bids Aug. 8 for dispensary building.

Ky., Frankfort—State Sinking Fund Comsn., Clell Coleman, State Auditor, has plans complete for repairing Capitol; Frankel & Curtis, Archt., Hernando Bldg., Lexington; probably open bids July 19. 5-29

Ky., Louisville—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids July 28 for preliminary excavating for U. S. post office, court house and custom house. 5-29

La., New Orleans—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids Aug. 7 for erecting \$1,000,000 quarantine station. 5-8

Md., Baltimore—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids Aug. 12 for pumping plant in receiving and detention building, U. S. immigration station.

Md., Sparrows Point, Baltimore—Morris Wolf, 405 Drexel Bldg., Philadelphia, Pa., A. N. Rapoport, Local Agent, American Bldg., Baltimore, erect \$14,000, 1-story, 25x80 ft., brick post office to be leased to Government; Mr. Wolf erect at same time 3 adjoining stores, each 25x60 ft.

Miss., Greenwood—Following estimating on remodeling post office, bids to be received July 28 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; Murphey Pound, Swift-Kyle Bldg., Columbus, Ga.; A. J. Honeycutt Co., Martin Bldg., Birmingham, Ala.; \$90,000. 7-10

Okl., Oklahoma City—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., reported, start erecting \$1,100,000 addition to post office about Sept. 15; W. G. Johnson, Postmaster. 10-31-29

Tenn., Clarksville—Smythe & Co., Washington, D. C., estimating on general contract for remodeling post office, bids to be received by Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., July 30. 7-10

Tenn., Johnson City—National Home for Disabled Volunteer Soldiers, George H. Wood, Pres., Bd. of Managers, erect additional barrack with capacity of 350, and wings to hospital with 100 additional beds; \$650,000 appropriated by Congress. 7-3

Tenn., Kingsport—Following contractors estimating on \$190,000 post office, bids July 25 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; Beeler & Co., Inc., Johnson City, Tenn.; A. R. Murray, 502 Island Home Ave.; Smory Construction Co., and Worsham Bros., both Empire Bldg., all Knoxville; Algernon Blair, First Natl. Bank Bldg., Montgomery, Ala.; J. D. Phipps, Boxley Bldg., Roanoke, Va.; Newport Contracting & Engineering Co., Lee Hall, Va.; Fanning & Sweeney, Inc., Jefferson Bldg., Greensboro, N. C.; Murphey Pound, Swift-Kyle Bldg., Columbus, Ga.; Yeager & Sons, Danville, Ill. 7-3

Tex., El Paso—Following contractors on alterations to heating system, etc. at Custom House, bids July 23 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; Budd Grate Co., 2011 E. Hagert St.; Philadelphia Boiler Works, 1737 Filbert St.; Clarence A. Martindell, 7359 Ogontz Ave., all Philadelphia, Pa.; W. C. Spratt, Fredericksburg, Va.; O'Pry Plumb-

ing & Heating Co., 169 Cotton Ave., Macon, Ga.; Wilson Bros., 322 N. Halstead St.; Fettes, Love & Sieben, 1426 Irving Park Blvd., both Chicago, Ill.; Chas. H. Law, 324 Twenty-sixth St., St. Petersburg, Fla.; J. J. Breen Co., 803½ N. Tryon St., Charlotte, N. C.; Redmon Heating Co., 146 N. 4th St., Louisville, Ky.; Van Dyck Heating & Plumbing Co., 929 Sixth Ave., Des Moines, Ia.; Walter Kidder, 2109 Sixth St., Meridian, Miss.; D. W. Chapman, 101 Morgan St., Tampa; G. C. Wilcoxon, 500 W. Short St., Lexington, Ky.; Farrell Heating & Plumbing Co., 248 Ivy St., N. E., Atlanta, Ga.; J. L. Powers, Bennettsville, S. C.; C. J. Gleason, 1720 Walton Way, Augusta, Ga.

Tex., El Paso—Dept. of Justice, Washington, D. C., having plans drawn for prison; \$400,000 appropriated for first units; Trost & Trost, Archts., Two Republic Bldg. 6-15

Tex., Huntsville—State Prison Bld., Austin, considering plans for expending \$150,000 for sanitary improvements, etc. See Tex., Sugar Land.

Tex., Randolph Field, Schertz—Capt. A. W. Parker, Constructing Quartermaster, opens bids Aug. 15 for \$200,000 general hospital bldg. and executive bldg., irregular shape, 1 story, basement, masonry, Spanish type; cadet mess hall and recreational bldg., 2 story, basement, approx. 105x240 ft., masonry, Spanish type, approx. 600 cadet capacity, \$180,000; 2 cadet barracks, \$150,000, 340x40 ft., masonry, Spanish type, approx. 100 cadet capacity; Emmett T. Jackson, Archt., Bldrs. Exch. Bldg.; W. E. Simpson Co., Engr., Milam Bldg., both San Antonio. 1-16

Tex., Randolph Field Schertz—Capt. A. W. Parker, Constructing Quartermaster, receives bids Aug. 10 for storm sewers and gas distributing system. 1-16

Tex., Randolph Field, Schertz—Capt. A. W. Parker, Constructing Quartermaster, receives bids Aug. 6 for following: \$10,000 bakery building, 1 story, approx. 30x60 ft., brick, struc. clay tile, stucco, rein. conc., cast stone, tile roof, steel sash, metal lath and plaster, slate partitions, cement floor, plumbing and wiring included in gen. contr.; officers' mess house, including lounge, grill with kitchen, card room, billiard room, barber shop, balcony connecting with swimming pool, second floor ball room, approx. 40x80 ft., maple floor, dressing rooms, beauty parlor, etc., men's rest room and lockers, serving kitchen and dumb waiter, balcony connecting for dancing in open air; \$60,000; Harvey P. Smith, Archt., Natl. Bank of Commerce Bldg.; Lilly & Drought, Engrs., Frost Bldg., both San Antonio; post exchange, 1 story, irregular shape, masonry construction, Spanish or Mission type, 180x280 ft., includes cold storage plant, stores, garage and filling station; \$45,000; Robt. B. Kelly, Archt., Milam Bldg.; Matthews & Kenan, Engrs., Smith-Young Tower, both San Antonio. 2-20

Tex., Sugar Land—State Prison Bd., Austin, considering plans for expending \$450,000 appropriated by Legislature for improving state prison farms of Sugar Land Dist. and state penitentiary, Huntsville; \$150,000 for main prison and \$300,000 for farms; includes sanitary improvements, industrial equipment, etc.; Giesecke & Harris, Archts., M. & M. Bldg., Houston; L. E. Royer, Conslt. Engr.; Dr. F. E. Giesecke, & M. College, College Station, Act. Supvr. Engr.

Va., Hampton Roads, Norfolk—Navy Dept. Bureau of Yards and Docks, Washington, D. C., reported, drawing final plans for first unit of system of buildings to house activities of Hampton Roads Naval Training Station, construction to get under way in October; first unit probably consist of 2 barracks buildings and mess hall; Colonial American architecture, 2 story, barracks to accommodate 228 each; \$800,000 available; part of \$6,000,000 building program to extend over period of 5 to 10 years; Rear Adm. Guy H. Burrage, Commandant, Capt. W. H. Allen, Public Works Officer, Fifth Naval Dist. 5-1

Va., Mt. Vernon—U. S. Dept. of Agriculture, Bureau of Public Roads, Thos. H. MacDonald, Ch. of Bureau, Washington, D. C., erect Terminal Bldg. at Mt. Vernon end of Mount Vernon Blvd.

Va., Richmond—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., has low bid from Westbrook Elevator Mfg. Co., Spring St., Danville, Va., at \$58,500 for elevator plant, post office and court house. 7-3

W. Va., Parkersburg—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., receives bids Aug. 8 for post office. 1-2

### Hospitals, Sanitariums, Etc.

Ala., Mobile—City Comsn. to consider bonds for enlargement of city hospital.

Ark., Benton—State Construction Comsn., Joseph M. Hill, Fort Smith, Chmn., has preliminary plans complete for \$3,250,000 State Hospital for Nervous Diseases, Highway No. 67, near Benton; 20 or more bldgs.; Mann, Wanger & King, Donaghey Bldg., Little Rock, and Hot Springs, and Sullivan W. Jones, 25 W. 45th St., New York, Archts.; Lund Engineering Co., Home Insurance Bldg., Little Rock, Engr. 4-3

Ga., Columbus—Following contractors estimating on \$150,000 alterations and additions to City Hospital, H. B. Crawford, City Mgr.; bids in July 21: J. S. McCauley & Co., Bona Allen Bldg.; Grahm Construction Co., Red Rock Bldg., both Atlanta; J. P. Bradfield, Hill Bldg.; Murphey Pound, Swift-Kyle Bldg., both Columbus; A. E. Irtner, Albany; T. Firth Lockwood, Archt., Murrah Bldg. 1-10

Ky., Owensboro—City, Logan E. Meredith, Mayor, authorized to select architect and secure bids on proposed 18-room children's annex to City Hospital; \$50,000. 3-4

N. C., Elkin—Hugh Chatham Memorial Hospital Bd., Rev. L. B. Abernathy, Pres., has plans complete, soon take bids on \$70,000 hospital; 2 story, basement, brick and tile, comp. roof, stone trim; Harold Macklin, Archt., Reynolds Bldg., Winston-Salem. 5-29

Okl., Norman—State Bd. of Affairs, Oklahoma City, having plans completed and will soon call for bids for \$150,000, 3-story ward bldg., Central State Hospital for Insane; plans by Engr. Dept., State Bd. of Affairs. 3-27

Okl., Oklahoma City—City, M. Peshek, Jr., Clk., W. W. Small, City Engr., soon call \$1,500,000 bond election, \$250,000 for city detention hospital. See City and County.

N. C., Sanford—Lee County Hospital Bd. of Trustees selected site, McIver Park, for \$62,500 hospital; plans starting work within 60 to 90 days; E. G. Flannagan, Archt., Henderson. 7-10

Okl., Tulsa—St. Johns Hospital, care Sisters of Sorrowful Mother has bids in, soon let contract for \$125,000 convent and chaplains residence; 4 story, basement, 80x90 ft., brick, tile; E. Brailemaier & Sons, Archts., Milwaukee, Wis.

Okl., Vinta—State Bd. of Affairs, Oklahoma City, opens bids July 22 for \$150,000 addition to Eastern Oklahoma Hospital for Insane. 3-13

Tex., Amarillo—City may vote on \$125,000 bonds for erecting nurses' home, addition to present plant and detention hospital at Northwest Texas Hospital. 6-12

Tex., Randolph Field, Schertz—Capt. A. W. Parker, Constructing Quartermaster, opens bids Aug. 15 for \$200,000 general hospital bldg. and executive bldg. See Buildings Proposed—Government and State.

Va., Norfolk—Following estimating on general contract for additional toilet rooms, Marine Hospital, bids to be received July 22 by Jas. A. Wetmore, Supvg. Archt., Treasury Dept., Washington, D. C.; J. J. Breen Co., 803½ N. Tryon St., Charlotte, N. C.; D. W. Chapman, Builders Exchange, Baltimore, Md.; G. C. Wilcoxon, 500 W. Short St., Lexington, Ky.; Clarence A. Martindell, 7359 Ogontz Ave., Philadelphia, Pa.; W. C. Spratt, Fredericksburg, Va.; Charles M. Ewing, 1371 N. W. Third St., Miami, Fla.; J. L. Powers, Bennettsville, S. C.; C. J. Gleason, 1720 Walton Way, Augusta, Ga.; W. S. Moffett, Staunton, Va.; Wm. W. Durnall, 213 S. Tennessee Ave., Lakeland, Fla.; J. G. Bensele Co., 3005 Shannon Dr., Baltimore, Md.; C. E. King, 1009 Wertland St., Charlottesville, Va.; W. S. King Co., Inc., 921 W. Tioga St., Philadelphia, Pa.; Louis Gertner, Jr., 832 E. 533rd St., Chicago, Ill.; Smythe & Co., 1416 F St., N. W., Washington, D. C. 7-3

Va., Richmond—Virginia Home for Incurables receives bids July 21 (extended date) for 7-story, 190x80 ft., brick, fireproof building, Powhatan and Appomattox Sts.; accommodate 100; porch 106 ft. long, sun parlors on each floor, running water in each room; 2-story servants' quarters; Baskerville & Lambert, Archts., Central Natl. Bank Bldg. 7-10

### Hotels and Apartments

Fla., Miami Beach—Mrs. Kate Stont erect \$10,000, 2-story, conc. block apartment, Meridian Ave., between Third and Fourth Sts.; V. H. Nellenbogen, Archt., Bastain Bldg.



Ky., Louisville—M. A. & J. Horney Co., 601 E. Walnut St., having plans prepared by E. W. W. Archer, Coleman Bldg., for \$20,000, 2-story, 12-room tenement building. Hancock and Chestnut Sts.

La., Shreveport—L. H. Johnson has plans by Jones, Roessie, Olschner & Welner, Ardis Bldg., and soon call for bids for 4-story, brick, 20-room addition to Hotel Natchitoches; built-up comp. roof, wood floors. 5-15

Mo., St. Louis—Philip Rollhaus, Jr., Archt., Central Natl. Bank Bldg., preparing plans for two 2-story and basement, 100x30 ft., 12-unit apartments, Hoover Ave. east of Big Bend Blvd.; \$150,000; built-up comp. and asphalt shingle roofs, terra cotta trim, steam heat.

Okla., Hobart—Nash Hotel Co. soon ready for bids for \$160,000 hotel; E. H. Eads & Co., Archts., Chickasha. 1-23

Okla., Oklahoma City—Aldridge Hotel Co., E. C. Aldridge, Pres., Wewoka, reported, plans \$2,000,000, 20-story, 500-room hotel.

Tex., Corpus Christi—Breakers Hotel Co., Frank Thomas, Pres., plans remodeling hotel, new furniture and equipment; also plans addition.

Tex., Fort Worth—C. C. Pitts having plans prepared by W. G. Clarkson & Co., First Natl. Bank Bldg., for 2-story, 16-apartment, 17th and Terrell Sts.

Tex., Liberty—Mrs. T. B. Snodgrass erect \$50,000, 2-story, brick, rein. conc., steel and hollow tile, 50-room hotel; C. G. Curtis, Archt., 1628 Hawthorne St., Houston.

Va., Roanoke—New Hotel Corp., Frank S. Cooper, Pres., 1301 Third St., S. W., reported, soon ready for bids for \$350,000, 135-room addition to Hotel Patrick Henry; Frye & Stone, Archts., MacBain Bldg., Robert R. Myer, Lessee, Birmingham, Ala.

### Miscellaneous

S. C., Charleston—Isle of Palms, Inc., B. H. Hardaway, Jr., erect hotel in connection with beach resort. 5-24

Tenn., Knoxville—Strong Mission Home, Judge H. L. McClung, Belcaro St., Pres., Bd. of Trustees, erect \$10,000 building; 2 stories and basement; Albert E. Gredig, Archt., Mercantile Bldg.

Tex., Raymondville—Ernest Grisby, Raymondville, and Markham A. Thompson, San Benito, soon start work on \$15,000 mortuary; chapel, office, family room, music room, slumber room, casket display room, preparation room and garage, with 5-room apartment on second floor.

Va., Wakefield—Wakefield Memorial Assn., Mrs. Harry Lee Rust, Sr., Pres., 2400 16th St., N. W., Washington, selected Edw. W. Donn, Jr., 1920 K St., N. W., Washington, to design reproduction of house in which George Washington was born; total cost of land, restoration and general improvements about \$500,000. 2-28-29

### Railway Stations, Sheds, Etc.

Mo., St. Louis—Illinois Terminal R. R. System, (which operates Illinois Traction, Inc.) A. P. Titus, V.-P., soon start work on foundation for \$5,000,000 warehouse and freight terminal, High, Morgan and 12th Sts. and Lucas Ave.; 20 stories with 2 wings of 12 stories to contain 1,000,000 sq. ft. warehouse space; 8-story tower for 160,000 sq. ft. office space; to be constructed in connection with \$16,000,000 elevated-surface-subway line on which excavation will soon begin; Mauran, Russell & Crowell, Archts., Chemical Bldg.; J. A. Hooke, Conslt. Engr., Buder Bldg. 11-29-29

### Schools

Ala., Montgomery—Bd. of Education, L. C. Cardinal, Chmn., call for bids in 30 days on 4-classroom and cafeteria addition to Highland Ave. school and addition to Lovelace school.

Ark., Little Rock—School Bd. rejected bids for 2-room and auditorium at Park Hill School and 4-classroom, basement and auditorium addition to Rose City School. 7-10

Fla., Apalachicola—Franklin County Bd. of Public Instruction having plans prepared by E. R. James for remodeling high school into grammar school; additional rooms, auditorium to seat 500; \$75,000 available; plans ready about Aug. 1.

Fla., Jacksonville—Duval County Bd. of Public Instruction, R. B. Rutherford, Sec., receives bids July 25 for following school additions: Norwood, 3-classroom addition; Fishwell, 43x55 ft. auditorium; Dinsmore, 3-room addition; \$25,000; Jefferson D. Powell, Archt., Professional Bldg.

Ga., Griffin—Spalding County Bd. of Education soon ready for bids for 6 schools in county; brick and frame, stone trim, comp. roofs; plans by State Dept. of Education, Atlanta.

Ga., Smithville—School Bd. plans rebuild consolidated school.

Ky., Catlettsburg—Bd. of Education, J. T. Miracle, Supt., erect school on Panola St.

Ky., Owensboro—Davies County Bd. of Education, J. W. Snyder, Supt., having plans revised by Clarence W. Kimberlin, 1001 Frederick St., and let contract Aug. 5 for \$20,000, 1-story, 205x87 ft., hollow tile and brick school near Sutherland, 7 miles from Owensboro; hardwood floors, built-up roof. 7-3

La., Alto—Richland Parish School Bd., Rayville, receives separate bids Aug. 5 for 1-story, brick schools at Alto and Archibald; \$35,000 each; J. W. Smith & Associates, Archts., Ouachita Natl. Bank Bldg., Monroe.

La., Lake Charles—School Bd., Floyd Hamilton, Pres., receives bids Aug. 6 for alterations to Lake Charles High School; separate bids on general contract; plumbing; electrical; cafeteria equipment; R. S. McCook, Archt., First Natl. Bank Bldg.

La., Lake Charles — DeSalle Christian Brothers receives bids July 22 at office Wm. R. Burk, Balter Bldg., New Orleans, for \$35,000 rein. conc. brick and steel gymnasium-auditorium; 90x120 ft., 4 classrooms, tile and comp. roof, wood floors; following contractors estimating: J. A. Petty & Sons, Inc., Godchaux Bldg.; Caldwell Bros., 816 Howard Ave.; J. A. Haase, Jr., 916 Union St.; Gitz Construction Co., Balter Bldg., all New Orleans; Adolph A. See, 1317 Ryan St., Lake Charles. 7-3

La., Monroe—Ouachita Parish School Bd., T. O. Brown, Supt., erect 3-room school at Eureka and 4-room addition to Ransom school in West Monroe; both frame; J. W. Smith & Associates, Archts., Ouachita Natl. Bank Bldg.; bids in.

La., New Orleans—Orleans Parish School Bd., A. J. Tate, Sec., City Hall Annex, has low bid at \$12,985 from J. A. Petty & Sons, Inc., Godchaux Bldg., for extension and alterations to Robert E. Lee School; 167x57 ft.; 8 classrooms, cafeteria and boiler room; slate roof, brick exterior; E. A. Christy, Act. Supvg. Archt., City Hall Annex. 6-26

La., Start—Richland Parish School Bd., Rayville, called election July 15 on \$25,000 bonds for school.

La., St. Benedict—Church of St. Joseph's Abbey, Father Albert Paul, in charge, receiving bids, no date set for opening, through Theo. Brune, Archt., 1536 Felicite St., New Orleans, for abbey building to include church and living quarters for seminary; 3 story, 114x194 ft., rein. conc., brick, stone trim, wood pile foundation, tile and comp. roof, conc. floors, rein. steel, struc. steel, marble, terrazzo floors. Mosaic work; separate contracts to be let for heating and ventilating, plumbing and electric wiring; hardware to be furnished by owners; following contracts estimating: Gervais F. Favrot; Gitz Construction Co., both Balter Bldg.; Geary-Oakes Co.; A. M. Fromberg, both Queen & Crescent Bldg.; J. A. Petty & Sons, Inc., Godchaux Bldg.; Lionel F. Favret, Louisiana Bldg.; Geo. J. Glover, Inc., Whitney Bank Bldg., all New Orleans; Cowgill & LeBlanc, Bogalusa. 7-3

La., Vivian—Caddo Parish School Bd., E. Weldon Jones, Shreveport, receives bids Aug. 20 for \$125,000, 2-story, brick and conc. school; Edw. F. Neild, Archt., City Bank Bldg., Shreveport. 6-19

Md., Baltimore—Bd. of Awards, City Hall, receives bids July 23, in duplicate, for alterations and additions to heating system in School No. 55 and School No. 74, and for roofing over present court between present cafeteria and gymnasium to form new kitchen at School No. 404; Joshua R. Jolly, Act. Sec. Bd. of School Commrs.; specifications at office Chief of Maintenance and Operation of School Bldgs., 1230 E. 20th St.

Miss., Algoma—Pontotoc County Bd. of Education, B. G. Eubank, Pontotoc, receives bids July 26 for \$20,000, one-story, brick, 8-classroom school.

Miss., Columbia — Mississippi Industrial Training School, Dr. B. L. Coulter, Supt., receives bids July 30 for furnishing and installing engine driven electric power generating plant, material and equipment; Vinson B. Smith, Jr., Archt., Natl. Bank of Gulfport, Gulfport.

Miss., Forest Hill—Forest Hill Consolidated School Dist. Trustees have low bid from W. S. Rutter, Brookhaven, for 1-story, 210x64 ft., rein. conc. and brick high school; 8 classrooms and auditorium to seat 500; wood floors, built-up roof; Hull & Malvaney, Archts., Merchants Bank Bldg., Jackson. 6-26

Miss., Goodman—Holmes Agricultural High School and Junior College Bd. of Trustees, W. P. Ellis, Chmn., receives bids July 24 for drilling deep well on campus of college; furnish 75 gal. water per minute; soon ready for bids for dormitory to house 100 students, remodeling present dormitory, erecting auditorium annex in connection with administration building which will be remodeled, brick veneering home science building and erecting supt. residence; \$125,000, incorrectly reported receiving bids July 24 for this work; J. M. Spain, Archt., Merchants Bank Bldg., Jackson. 5-8

Miss., Hopewell — Hopewell School Dist. Trustees receive bids July 18 for \$20,000 school.

Miss., Jackson—City plans election on \$1,250,000 bonds for public improvements, including school buildings.

Miss., Lucedale—Basin Consolidated School Dist. Trustees receive bids July 26 at office George County Supt. of Education for \$10,000, 1-story, brick school; plans from office County Supt. of Education.

Miss., Orange Grove—Orange Lake Consolidated School Dist. voted \$20,000 bonds for school near Orange Grove; address Jackson County Bd. of Supervisor, Pascagoula. 6-26

Miss., Tchula—Holmes County Bd. of Supervisors, Lexington, called election Aug. 1 on \$30,000 bonds in Tchula Special School Dist. for annex to school.

Miss., Wesson — Bd. of Trustees, Copiah-Lincoln Agricultural High School and Jr. College, erect residence; Hull & Malvaney, Archts., Merchants Bank Bldg., Jackson; bids in.

Mo., Springfield—Springfield School Dist. A. R. Stewart, Sec., receives bids July 24 for gymnasium at Sr. High School and erection of Lincoln School; separate bids as follows: General work; plumbing, sewerage and gas fitting; heating and ventilating apparatus; electric work; plans at office Earl Hawkins, Archt., McDaniel Bldg., Springfield, and office Wm. B. Ittner, Inc., Asso. Archt., 3615 Olive St. St. Louis.

Mo., St. Joseph—School Bd., A. L. Loving, Sec., receives bids Aug. 7 for \$600,000, 3-story and basement, 258x248 ft., rein. conc., brick and stone Central High School; 100 classrooms, gymnasium and auditorium to seat 1600 each; radio system, intercommunicating telephone system, clock program and signal system; Eckel & Aldrich, Archts., Corby Bldg.; Walter E. Gillham, Conslt. Engr., Interstate Bldg., Kansas City; Wm. B. Ittner, Inc., Supvg. Archt., Bd. of Education Bldg., St. Louis. 5-1

N. C., Asheville—Buncombe County Bd. of Commrs. called election Aug. 12 in Sand Hill School District on \$50,000 bonds for elementary school at Enka. 4-17

N. C., Salisbury—Livingston College, Wm. J. Trent, Pres., erect \$100,000, 2-story and basement, 158x77 ft., brick, J. G. Price Memorial Bldg.; cast stone and Indiana limestone trim, tin roof with alternate on Buckingham slate; Hentz, Adler & Shutze, and Ivey & Crook, Archts., Candler Bldg., Atlanta, Ga.; Willard G. Rogers, Asso. Archt., Salisbury, and 510 E. Boulevard, Charlotte; bids in. 7-10

Okla., Geary—Bd. of Education, Mrs. M. E. Stansberry, Clk., erect \$20,000, 1-story, 30x50 ft., brick and stone high school addition; Tonini & Bramblett, Archts., 416½ W. Main St., Oklahoma City; bids in.

Okla., Oklahoma—Bd. of Education, Nelson Kilby, Supt., erect \$10,000, brick, 4-classroom and auditorium school.

S. C., Winnsboro—Bd. of School Commrs., School Dist. No. 14, Dr. C. S. McCants, Chmn., receives bids July 22 for 1-story and basement, brick school; comp. roof, wood floors; A. D. Gilchrist, Archt., Rock Hill. 7-3

Tenn., Alton Park, Chattanooga—Hamilton County Bd. of Education, Jas. A. Cash, Commr., has low bid at \$45,400 from H. L. Brown, 509-A W. Seventh St., for 1-story and basement, brick and tile, 11-classroom and auditorium elementary school; auditorium to seat 200; Bull & Gosnell, Archts., Volunteer Life Bldg. 5-29

Tenn., Chattanooga—City, H. D. Huffacker, Commr., cancelled election Aug. 7 on \$600,000 bonds for school improvements. 7-3

Tenn., Johnson City—East Tennessee State Teachers' College receives bids Aug. 5 for \$150,000 library building, and heating plant; Coile & Cardwell, Archts., Johnson City. 6-12

Tenn., Johnson City—Following contractors estimating on \$75,000 addition and alterations to girls' dormitory at East Tennessee State Teachers' College, bids July 26: Batson-Cook Construction Co., West Point, Ga.; Fiske-Carter Construction Co., Masonic Temple Bldg., Greenville, S. C.; Kingsolver Construction Co., Bristol, Va.; Worsham Bros., Empire Bldg., Island Home; A. R. McMurry, Emory Construction Co., Empire Bldg., all Knoxville; Beeler & Co.; Marshall Construction Co.; Bacon Building Co.; J. E. Cloninger; E. R. Bayless, all Johnson City; Pyle Bros., Kingsport; Pyle Bros.; J. M. Allen Co., 409 Forest Ave.; Rogers & Leventhal, 826 E. 11th St.; Home Builders Service Co., 827 Broad St., all Chattanooga; plans by R. H. Hunt & Co., James Bldg., Chattanooga, call for 3 stories and basement, brick, rein. conc. and tile, limestone trim. conc. and terrazzo floors 6-12

Tenn., Memphis—West Tennessee State Teachers' College, J. W. Brister, Pres., received bids July 18 for \$200,000, 3-story and basement, 78x193 ft., brick and rein. conc. science building; comp. built-up roof, conc. and wood floors; Geo. Mahan, Jr., Archt., Manhattan Bank Bldg. 5-29

Tenn., Nashville—Bd of Education having plans prepared by Marr & Holman, Stahlman Bldg., for \$150,000 junior high school in North Nashville. 6-23

Tenn., Nashville—Davidson County Bd. of Education, W. C. Dodson, Supt., has low bid from W. R. Smith, Cotton States Bldg., for \$57,000, 3-story, 147x116 ft., brick and stone high school; Geo. D. Waller, Archt., Independent Life Bldg. See Want Section—Building Material and Equipment. 7-3

Tex., Houston—Schriener Institute, J. J. Delaney, Pres., erect building to house chemistry and zoology laboratories.

Tex., Junction—Junction Ind. School Dist. having plans prepared by Phelps & Dewees, Gunter Bldg., San Antonio, for \$85,000 fireproof high school.

Tex., Lavernia—Lavernia School Dist. Trustees have low bid at \$27,700 from Geo. C. Weber, 519 Porter St., San Antonio, for 1-story, 50x180 ft., brick and tile, 8-classroom and auditorium high and grade school; Olin Boese, Archt., Builders Exchange Bldg.; Lloyd D. Royer, Mech. Engr., Smith-Young Tower, both San Antonio.

Tex., Laredo—Laredo Ind. School Dist., W. P. Galligan, Supt. of Schools, plans election early in 1931 on \$350,000 bonds for high school; Giesecke & Harris, Archts., Norwood Bldg., Austin. 6-26

Tex., Rio Grande City—Rio Grande City Ind. Dist. School Bd. plans high school and grammar school; R. Newell Waters, Archt., Weslaco; soon vote on \$100,000 to \$150,000 bonds.

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., erect 1-story, 7-classroom, cafeteria and assembly hall addition and remodel Robt. B. Green School; J. Clyde and Percy W. Williams, Archts., Moore Bldg.; W. E. Simpson Co., Engr., Milam Bldg.; Phelps & Dewees, School Archts., Gunter Archts., Gunter Bldg.; bids in.

Va., Lovingsston—Nelson County School Bd. has low bid at \$41,760 from Motely Construction Co., Farmville, for 8-room, and auditorium school. 6-26

Va., Richmond—Carle-Boehling Co., Inc., 1641 W. Broad St., has contract for central heating plant at St. Joseph's Academy and Orphan Asylum at Hollybrook farm, 250-acre tract on Richmond-Washington highway; taking bids on 13 buildings to cost \$1,000,000, covering 40 acres; plans by Carneal, Johnston & Wright, Electric Bldg., include dormitories, central chapel, school and administration buildings, gymnasium, priest's house; brick, terra cotta, stone, tile roof, fireproof. 7-3

Va., Ballston—Arlington County Bd. of Education, Rosslyn, has low bid at \$132,400 from J. H. Coleman, Lynchburg, for alterations and 32-room addition to Washington-Lee High School; plans by Raymond Long, Archt. for State Bd. of Education, Richmond. 7-10

Va., Rosslyn—Arlington County Bd. of Education erect additions to schools at Aurora Heights, Lyon Park, Bon Air and Aurora Hills.

W. Va., Charleston—Charleston Ind. School Dist. Bd. of Education, E. A. Babcock, Sec., receives bids July 22 for 4-room addition to Capitol Grade School, Washington and Jefferson Sts.; plans from Warne, Tucker, Silling & Hutchisson, Archts., Masonic Temple Bldg.; also receives bids July 22 for Mount Ovas Elementary School; plans from Herbert S. Kyle, Archt., Union Tr. Bldg.

W. Va., Chesapeake—Loudon Ind. School Dist. Bd. of Education, Dr. R. H. Dunn, Pres., Charleston, erect 1-story, 4-room brick school; Walter F. Martens, Archt., Masonic Temple Bldg., Charleston; bids in.

W. Va., Malden—Malden School Dist. defeated \$110,000 bonds for high school; R. O. Samples, Supt. of Education. 6-12

W. Va., Sophia—Raleigh County Bd. of Education, Beckley, having plans prepared by Garry & Sheffey, Bailey Bldg., Bluefield, for \$14,000, 4-classroom and basement school at Sophia and \$18,000, 6-room brick, stone trim school at Spragae.

W. Va., Sprague—See W. Va., Sophia.

### Stores

La., Lake Charles—Berdon-Campbell Furniture Co., 701 Ryan St., has low bid from W. J. Quick, 424 Bilbo St., for 2-story and cotta floors; Asmus, Clark & McCook, Archts., First Natl. Bank Bldg. 7-3

La., New Orleans—Molise H. Goldstein, Archt., American Bank Bldg., prepared plans for improvements to 4-story brick and frame building, 733 Canal St.; new store front; bids in.

Mo., St. Louis—Sol Weinberg, 7386 Kingsbury St., erect 30x140 ft. store, Broadway and Carroll St., to be leased to J. J. Newberry Co., 245 Fifth Ave., New York.

N. C., Charlotte—Ed. Mellon's Store, T. M. Shelton, Mgr., 8 W. Trade St., soon let contract to remodel building.

S. C., Rock Hill—A. D. Gilchrist, Archt., received bids July 18 for \$100,000, 64x129 ft., 2-story and basement, brick store on Main St. for Belk Brothers, 23 E. Trade St., Charlotte, N. C.; tar and gravel roof, elevator to be purchased by owner. 7-3

Tex., Liberty—B. G. Riviere soon call for bids for brick, cast stone and stucco business building; F. W. and D. E. Steinmann, Archts., San Jacinto Life Bldg., Beaumont.

Tex., San Antonio—Dr. Wolf and Dr. Herff, care of Atlee B. & Robt. M. Ayres,

Archts., Smith-Young Tower, have low bid at \$18,787 from Moeller & Wellbacher, 1211 Willow St., for remodeling business building, 100 block W. Commerce St.; fireproof.

Va., Newport News—Tilghman, Collier & Van Buren have low bid at \$28,560 from Johnson Construction Co., Law Bldg., Norfolk, for 2-story store.

### Theatres

Fla., Tampa—Mrs. Ignacio Haya, care Oscar A. Ayala, 320 Cass St., soon let contract for \$70,000 New Rivoli theater-store arcade building, 7th Ave. and 15th St.; 70x200 ft.; theater to seat 1500 people; M. Leo Elliott, Archt., 706 Franklin St. 2-13

Ga., Marietta—Manning & Wink having plans prepared by Daniell & Beutell, Georgia Savings Bank Bldg., Atlanta, for theatre.

Tex., Victoria—Rubin Freis plans brick, rein. conc. and steel theatre.

### Warehouses

La., Alexandria—McGinnis & Thornton have permit for \$517,500 brick warehouse, Harris and Lee Sts., to be occupied by H. W. Palfrey, 109 De Soto St.

Tenn., Memphis—Patterson Transfer Co., Robert E. Galloway, Pres., 124 N. Second St., erect \$140,000 merchandise storage and distribution warehouse, Pennsylvania St. and Georgia Ave.; 2 stories, 280x193 ft., fireproof, rein. conc., 100,000 sq. ft. floor space; offices on second floor; W. F. Schulz, Consit. Engr., Shrine Bldg., drawing plans.

Tex., Luling—Southwestern Lumber Co. erect 1-story, 34x100 ft., tile showroom and warehouse; Herff & Jones, Archts., San Antonio Loan & Trust Bldg., San Antonio; bids locally.

Va., Richmond—Richmond, Fredericksburg & Potomac R. R., E. M. Hastings, Ch. Engr., receives bids July 21 for \$100,000, 260x188 ft., 2-story, brick and conc. warehouse to be leased to The Great Atlantic and Pacific Tea Co. 5-15

## BUILDING CONTRACTS AWARDED

### Bank and Office

Ala., Evergreen—Peoples Bank let contract to Upchurch Construction Co., Montgomery, for remodeling present building and erecting addition to bldg.

Ala., Montgomery—Dr. F. P. Boswell, 37 Horn Place, and Dr. George Blue, Bell Bldg., erecting \$20,000 office bldg., 116 Catoma St.; second floor to be occupied by Hohenberg & Co., 103 1/2 Bibb St.; first floor to contain stores; Hugger Bros. Construction Co., Gen. Contr., 205 Parallel St.

Mo., Kansas City—Fidelity National Bank & Trust Co., Lester W. Hall, Pres., let contract to Thompson-Starrett Co., Inc., N. E. 10th and McGee Sts., for 32-story bank and office building, 9th and Walnut Sts.; \$2,850,000, including bank fixtures, vaults and equipment; Holt, Price & Barnes, Archts., Telephone Bldg.; erection supervision and management by Hughes Bryant. 4-24

Va., Richmond—Federal Reserve Bank of Richmond, Geo. W. Seay, Gov., let contract to J. A. Jones Construction Co., Commercial Bank Bldg., Charlotte, N. C., at \$544,000 for bank addition, Ninth and Franklin St.; 70x120 ft., connected with present bldg. by colonnade, fireproof; total cost about \$628,000; Taylor & Fisher, Archts., Baltimore Trust Bldg., Baltimore, Md. 7-10

Va., Roanoke—Following sub-contracts awarded on \$500,000 office building for Norfolk & Western Ry., W. P. Wiltsee, Ch. Engr., for which J. P. Pettyjohn & Co., 212 Eighth St., Lynchburg, have general contract: Roofing and sheet metal work, T. B. Darnin-Adams Co., 324 Adams St., Lynchburg; crushed stone, W. W. Boxley & Co., Boxley Bldg.; mason work, F. B. Henderson; plumbing and heating, R. H. Lowe, Inc., 125 Salem Ave., W.; electrical work, Richardson-Wayland Electrical Corp., 106 Church Ave., W.; common brick, Roanoke-Webster Brick Co., Boxley Bldg.; face brick, Adams, Payne & Gleaves, Jefferson St.; misc. iron work, Roanoke Iron Works, 3217 Third St., S. E., all Roanoke; acoustic tile, W. Reid Hayden, Inc., 105 Cheapside; cork insulation, John R. Livezey, 526 St. Paul St., both Baltimore; vault doors, York Safe & Lock Co., York, Pa.; form work, Hausman Steel Co., Toledo, Ohio; mail chutes, Cutler Mail Chute Co., Rochester, N. Y.; rein. steel, Truscon Steel Co., Virginia Bond & Mortgage Bldg.; cast stone work,

Economy Concrete Co. of Virginia, Central Natl. Bank Bldg., both Richmond; glazed tile, Federal-Seaboard Terra Cotta Co., 10 E. 40th St., New York; common brick, General Shale Products Co., Johnson City, Tenn. 7-3

### Churches

D. C., Washington—Society of Friends, 1817 I St., N. W., and 13th and Irving St., let contract to Samuel J. Prescott Co., 814 13th St., N. W., for Friends Meeting House, Florida Ave. between Phelps Pl. and Decatur Pl.; meeting house proper, 72x42 ft., rear wing, 28x45 ft., conc. with mastic or cork floor, asbestos shingle roof, conc. footings under stone walls, fireproof; Wolf & Jones, Engrs., Otis Bldg.; Price & Walton, Archts., 119 S. Fourth St., both Philadelphia, Pa. 6-5

Md., Baltimore—Franklin St. Presbyterian Church, Dr. Harris E. Kirk, Pastor, 504 Cathedral St., let contract to Morrow Bros., Fidelity Bldg., for improving church, parish house and manse; Wm. Gordon Beecher, Archt., 12 E. Pleasant St. 6-12

Tex., Austin—Congregation Agudas Achem let contract to A. W. Thielepape for \$20,000 bldg., 301 E. 10th St.; brick, stone, 4 rooms; W. E. Ketchum, Archt., Pope Bldg.

Tex., Fort Worth—San Jose Parish Catholic Church let contract to Frank Firmin, 2801 Meadowbrook Drive, for \$16,000 bldg., N. Commerce and E. 14th St.; 1 story, 46x80 ft., brick, inner walls faced with tile, accommodate 600.

Tex., Houston—West End Methodist Church, Brunner Ave. and Floyd St., Ralph Walton, Chmn., Bldg. Comsn., Citizens State Bank Bldg., let contract to F. F. Porter, care West End Lumber Co., 3526 Washington St., for Sunday school; brick, conc., frame, 27x40 ft., wood and conc. floors, comp. shingle roof, conc. foundation; \$14,000; construction started; Cornell G. Curtis, Archt., 1628 Hawthorne Ave. 7-3

### City and County

Ga., Atlanta—City, John Terrell, Ch. Fire Dept., let contract to Cole Iron Works, Murphy Ave., S. E., for fire tower; steel, brick, steel stairs and fire escapes, 8 story; private plans.



Ga., Atlanta—Fulton County Bd. of Com. Mrs. and City Council having plans completed, ready for bids about July 19 for \$50,000 fire station near Buckhead; 2 stories and basement, conc. footings, brick, comp. roof, steam heat, dormitory facilities; Hentz, Adler & Schutze, Archts., Candler Bldg. 5-22

### Dwellings

Fla., Jacksonville—George D. Auchter Co., 600 E. Fourth St., has contract for \$150,000 additions to Epping Forest Estate, country home of Alfred I. du Pont; consist of living room and den, terraces and general treatment of exterior of building to match present finish, fireproof, new flower boxes, urns, lamp posts, balustrades, etc.; Marsh & Saxelby, Archt., Consolidated Bldg.

Fla., Miami—George C. Brett, 60 Fifth Ave., New York, let contract to Sandquist & Snow, Inc., 2692 S. W. 28th St., for \$75,000 residence below Coconut Grove, Cutler Rd.; 2 story, keystone, tile, marble and terrazzo floors, tower above second floor; 60-acre estate to be extensively landscaped and gardened, including coral rock and shrubbery.

Ga., Atlanta—Rutherford L. Ellis, 58 Marietta St., N. W., let contract to E. K. Van Winkle, 414 Norris Bldg., for \$17,000 residence, Chatham Rd.; 2 story, basement, brick veneer, slate roof, hardwood and tile floors, steam heat; private plans.

Ga., Atlanta—H. B. Schumpert, 139 Ellis St., N. E., erect residence, 1264 Boulevard Dr., N. E.; 1 story, 6 rooms and bath; brick veneer, comp. shingle roof, hot air heat; owner builds.

Ga., St. Simons Island—J. Edward Ogden, 147 Cedar St., New York, let contract to Ledsinger & Turner, Brunswick, for \$50,000 residence, Sea Island Beach; 2 story.

Ga., St. Simons Island—William B. McKinnon, Brunswick, let contract to P. S. Clarkson, 1610 Mallory St., Jacksonville, Fla., for summer residence; W. Kinnon Drake, Archt., 21 N. Ocean St., Jacksonville, Fla.

Ga., St. Simons Island—Jordan W. Lambert, care F. L. Abreu, Archt., Dunwoody Bldg., Brunswick, let contract to Ledsinger & Turner, Inc., Gordon Bldg., Brunswick, Ga., for \$40,000 residence, equipment, furnishings, etc., \$10,000; holly tile, skintiled brick facing, pine, oak, tile, linoleum floor, Hood's Mission tile roof. 6-26

La., New Orleans—Hy. E. Goland erect residence on Woodlawn St. between Kenelworth and Rosemary Sts.; N. Ascani, Contr., 5878 Canal Blvd., ready for sub-bids.

La., New Orleans—B. A. Russ, 4 Paladine Place, has contract for 2-story Colonial type residence, Broadway and Green Sts.; slate roof, hardwood floors; ready for sub-bids.

La., New Orleans—B. C. Johnson, 4736 DeMontluzin St., has contract for brick residence, 2530 Sage St., and ready for sub-bids.

La., New Orleans—Julian & Osborne, 2412 Wistaria St., has contract for duplex and 2 garages, Harding Drive between Jefferson Davis Parkway and Dumain St., for Shelton Redell; ready for sub-bids.

La., New Orleans—J. W. Johnson, 2618 N. Roman St., has contract for brick residence, 2112 Congress St., and ready for sub-bids.

La., New Orleans—E. L. Markel, 3838 Louisiana Ave. Parkway, has contract for \$22,500 brick veneer residence and \$8000 frame stucco residence, both in Oak Ridge Park, Metairie; ready for sub-bids.

Mo., Joplin—McCormick Construction Co., W. R. McCormick, Pres., Joplin Natl. Bank Bldg., erect \$5000, five-room stone bungalow on E. Seventh St.; hardwood floors.

Mo., St. Louis—F. Stockstich, Prairie Ave., has permit for \$12,000 brick dwelling, in Country Club Addition; J. A. Prah, Archt.-Bldr., 5521 S. Grand Ave.

Mo., St. Louis—V. Elam, 806 Chestnut St., erect six 26x46 ft. brick dwellings, 601-19 Oleatha St.; \$2,000; comp. roofs, hot air heat; Geo. C. Carr, Bldr., Calumet Bldg.

Mo., St. Louis—McPherson Avenue Development Co. erect three dwellings, 6330-36 Henner Ave.; four dwellings, 6328-40 Woodland Ave., and two dwellings, 6314-16 Woodland Ave.; \$29,600; all 1 story, 31x25 ft., brick, comp. roofs, hot air heat; Garrison & Bradley Construction Co., Archt.-Bldr., both 712 Chestnut St.

Mo., University City, St. Louis—Dr. O. Freitag, 3420 Arsenal St., has permit for \$10,000, 2-story, 30x26-ft. brick dwelling, 555 Stratford St.; remodel foundation, slate roof, steam heat; J. J. Mueller, Bldr., 5401 Kansas St.; G. W. Wolf, Archt., Big Bend Blvd.

S. C., Georgetown—J. C. Heslep Construction Co., Carolina Bank Bldg., Columbia, has contract for \$100,000 residence; brick, tile, conc., steel; LaFaye & LaFaye, Archts., 1224 Sumter St., Columbia.

Va., Richmond—Mrs. Effie Branch, 1 W. Franklin St., repair 3-story brick dwelling, Franklin and Foushee St.; \$30,000; Claiborne & Taylor, Gen. Contr., Broad Grace Arcade Bldg.

### Government and State

D. C., Washington—Bureau of Standards, Purchase Section, let contract to H. Herfurth, Jr., Dist. Natl. Bank Bldg., for altering and additions to north bldg.; W. J. Deming, Archt., 808 17th St., N. W.; T. W. Marshall, Struc. Engr., 1341 Connecticut Ave. 7-10

D. C., Washington—Arch. of The Capitol, David Lynn, let contract to C. H. Tompkins Co., 1608 K St., N. W., Washington, for clearing, excavating and foundation work for office bldg. for House of Representatives. 5-29

Md., Fort George G. Meade—Construction Quartermaster let contract to O'Connell Electric Co., 63 Mt. Hope Ave., Rochester, N. Y., at \$13,700, for underground electric system for officers' and noncommissioned officers' quarters area.

Okla., Fort Sill—Construction Quartermaster let contract to McMillen & Shelton, Enid, for dry cleaning plant.

Tenn., Memphis—Decatur Iron & Steel Co., Decatur, Ala., has contract for 385 tons struc. steel for remodeling and extension of custom house; National Construction Co., Gen. Contr., Glenn Bldg., Atlanta, Ga. 5-15

Tex., Fort Sam Houston, San Antonio—Constructing Quartermaster Capt. Will R. White let contract to A. H. Shafer, 829 N. St. Marys St., San Antonio, at \$28,000 for 11 warm air heating system units for buildings at Army Post. 6-12

Tex., Pleasanton—F. B. Ricks erect 1-story, 25x40 ft., brick, semi-fireproof building to be used for post office; Wilder & Smith, Archts., Texas Theatre Bldg., San Antonio; work to be done by local contractor.

Tex., Randolph Field, Schertz—Constructing Quartermaster, Capt. A. W. Parker let following contracts: Administration bldg., Murch Bros., Ry. Exch. Bldg., St. Louis, Mo., at \$211,300; plumbing and heating, A. H. Shafer, 829 N. St. Marys St., \$27,451; elec. wiring, Martin Wright Electric Co., Navarro St. by Auditorium, \$8149, elevators, Otis Elevator Co., \$5060; academic bldg., L. T. Wright & Co., Bldrs. Exch. Bldg., \$86,740; plumbing, heating and elec. wiring included in general contract; engineering air corps shops, L. T. Wright & Co., \$142,414; plumbing and elec. wiring in general contract; fencing, Southern Steel Co., 4700 S. Presa St.; drainage system, including grading and maintenance, Kirkwood, Whar-ton & Lee, 517-23 N. Flores St. 7-10

Va., Alexandria—Treasury Dept., Jas. A. Wetmore, Act. Supvr. Archt., Washington, D. C., let contract to J. E. Beaman Construction Co., Lawyer's Bldg., Raleigh, N. C., for custom house, post office, etc. 7-10

Va., Richmond—Treasury Dept., Jas. A. Wetmore, Act. Supvr. Archt., Washington, D. C., has low bid at \$778,000 from National Construction Co., Glenn Bldg., Atlanta, Ga., for extension and remodeling (except elevators and elevator hatchway, entrance of post office, courthouse and custom house. 7-10

### Hospitals, Sanitariums, Etc.

Tex., Abilene—State Bd. of Control, Claude Teer, Chmn., S. R. McCoy, Bldg. Inspector, Austin, tentatively awarded contract at \$39,164 to C. S. Oates & Sons, Abilene, for dormitory at Abilene State Hospital; David S. Castle Co., Archt., Alexander Bldg.

Tex., Galveston—Following sub-contracts awarded on \$50,000 Marine Hospital for which Ring Construction Co., 95 S. 11th St., Minneapolis, Minn., has general contract: Plumbing, Farwell Plumbing & Heating Co., 322 Ash Lane, Dallas; millwork, Steves Sash & Door Co., 602 Monterey St., San Antonio; interior tile, International Tile Co., 1420 McKinney St., Houston. 6-19

Tex., Rusk—State Bd. of Control, Claude D. Teer, Chmn., Austin, let contract to E. B. Snelling, at \$32,590, for remodeling negro ward bldg. into dormitory, East Texas State Hospital; 59x121 ft.; remove roof, interior walls, erect conc. frame, plaster walls and partitions, metal lath, conc. floors, conc. stairways, new wire guards for exterior windows; Page Bros., Archts., Austin Nat'l Bank Bldg., Austin. 6-5

W. Va., Parkersburg—St. Joseph's Hospital, Fergus C. O'Connor, Member, Bldg. Comsn., 101 13th St., let contract to Plate Construction Co., 726 Jeannett St., at \$281,600, for hospital and nurses' home; brick, rein. conc., 4 story; Fox, Duthie & Foote, Archts., Union Trust Bldg., Cleveland, Ohio. 7-10

W. Va., Weston—State Bd. of Control, Charleston, let contract to R. Mankin & Co., 914½ Sixth Ave., Huntington, at \$112,900, for medical center, Weston State Hospital; brick, Bedford limestone trim, 3 stories, 54.3 x 197.8 ft., salt glazed brick interior walls, conc. joist with tile filler floor and ceiling constr., ramps, cement, terrazzo and tile floors, wood doors and trim, plaster ceilings; heating, plumbing and gas fitting to Meyers Brothers, 219 Hale St., Charleston, at \$18,707.40; elec. work, Edward M. Coll, 229 S Third St., Clarksburg, \$4061; R. A. Gillis, Archt., Fleming Bldg., Fairmont. 5-22

### Hotels and Apartments

Ala., Evergreen—Evergreen Hotel remodel building; Upchurch Construction Co., Contr., Montgomery.

Ga., Atlanta—O. T. Hennessee, 683 Juniper St., N. E., erect \$20,000, 2-story and basement, 12-apartment, 678 Somerset Terrace, N. E.; brick veneer, stone trim, built-up roof, hardwood and tile floors; owner, Archt.-Bldr.

Ky., Lexington—Following sub-contracts awarded on \$300,000 Wellington Arms Apartment for Wellington Corp., for which W. T. Congleton Co., Walton Ave. and Third St., has general contract: Plumbing, J. J. Fitzgerald, Main and Spring St.; elevator, Otis Elevator Co., McClelland Bldg.; wiring, Allen-Harper Electrical Engineering Corp., 206 S. Limestone St.; brick work, D. B. Bishop, Cherokee Park, all Lexington; window sash, Fenestra Steel Window Co., 1258 Washington Blvd., Detroit, Mich.; 4 stories and basement, 115x165 ft., conc. and brick, 41 suites, built-in equipment, electric elevator; Obadiah Bass, Archt., 131 W. Short St., Lexington. 7-10

La., Shreveport—Washington-Yourcee Hotel, Jack Tullos, Mgr., let contract at about \$18,000 to K. C. Wilson, Slattery Bldg., for alterations; Jones, Roessle, Olschner & Weiner, Archts., Ardls Bldg.

La., Sterlington—Louisiana Power & Light Co., Algiers, let contract at \$15,144 to J. W. O'Brien, 307 Malvern St., Monroe, for 2-story, 35-room, brick veneer hotel; The Clarence W. King, Archts., Bernhardt Bldg., Monroe, and Giddens-Lane Bldg., Shreveport. 7-10

Miss., Jackson—E. E. Morgan started work on 2-story, brick veneer, 20-room apartment, 1110 N. Jefferson St.; Manning Home Building Co., Contr., 9 Finance, Canton Road.

Miss., Jackson—Southern Tile Co., Inc., 523 Royal St., New Orleans, has contract for tile and terrazzo on \$900,000, 12-story Robert E. Lee Hotel for the Gammill Co., Stewart Gammill, Pres., for which W. J. McGee & Son, James Bldg., have general contract; Claude H. Lindsley, Archt., Jackson Tower Bldg. 4-244

Mo., St. Louis—Alma Seib has permit for \$10,000, 1-story, 25x48 ft., brick tenement, 4130 San Francisco St.; tile roof, hot air heat; J. C. Mueller & Son, Bldr., both 3528 Hebert St.

Mo., St. Louis—Jos. M. Leopold & Son, 7300 Clayton Road, erect \$15,000, 2-story, 45x59 ft. brick tenement, 3621-27 McCausland St.; comp. roof, steam heat, owners, Archts.-Bldrs.

Mo., St. Louis—Shirillee Investment Co., 4249 S. Kingshighway, has permit for 3-story, 76x24x110-ft. brick tenements, 52-59 Gravois Ave. and 4204-10 Ellenwood St.; \$60,000; comp. roofs, steam heat; Arsenal Watson Co., Archt.-Bldr., 4249 S. Kingshighway.

Mo., St. Louis—Arsenal Watson Co., 4249 S. Kingshighway, has permit for \$70,000, 3-story brick tenement, 1038-42 McCausland St.; comp. roofs, steam heat; owner, Archt.-Bldr.

Mo., St. Louis—A. J. Kourik, 1649A McLaren St., erect \$10,000, 2-story, 25x26 ft., brick tenement, 1637 McLaren St.; comp. roof, hot water heat; J. Schulte, Bldr., 2214 Newhouse St.; G. Becker, Archts., Ferguson, Mo.

Okla., Oklahoma City—F. E. Cook started work on two \$12,000, 2-story and basement, 36x40 ft., brick apartments; owner builds.

Okl., Oklahoma City—Lucian Black plans to soon start work on \$600,000, 11-story, 200-room hotel, Grand and Hudson Aves.; E. V. McCright & Co., Contrs., Commerce Exchange Bldg.; Flint & Broad, Archts., Meiba Bldg., Dallas, Tex., and Oklahoma City.

Tex., Dallas—H. T. Crabtree, 346 Woodin St., erect \$50,000, 2-story, 14-apartment, 736 N. Bishop Ave., Oak Cliff; electric refrigeration, gas-steam heat; L. E. Stubblefield, Contr., 2320 Latimer St.; Y. E. Planery, Archts.

### Miscellaneous

Tex., Harlingen—Harlingen Country Club let contract to A. Goldammer for \$10,000, 1-story, tile and stucco, Spanish type clubhouse; R. Newell Waters, Archt., Weslaco. 4-3

Tex., La Feria — Valley Memorial Park Assn. let contract to T. E. Carpenter, Weslaco, for \$15,000 administration building and 1000-ft. wrought iron fence; R. Newell, Archt., Weslaco.

### Schools

Ala., Fayette—Fayette County Bd. of Education, B. L. Balch, Supt., let contract at \$30,288 to M. L. Waddell, Tuscaloosa, for 1-story, 180x100 ft., brick, 12-classroom and auditorium school; asbestos shingle roof; Chas. H. McCauley, Archt., Jackson Bldg., Birmingham. 6-19

Ala., Montgomery—Bd. of Education, L. C. Cardinal, let contract to A. C. Sanford, 301 Washington Ave., for \$65,000, 2-story and basement, brick, stone trim school; comp. roof; Walter Ausfeld, Archt., Shepherd Bldg.

Ala., Thomasville—School Bd. let contract to A. C. Spinks for \$20,000 school to replace recently burned structure.

Ark., Little Rock—School Bd. let contract at \$12,382 to Virginia Bridge & Iron Co., Memphis, Tenn., for all-steel stadium for North Little Rock Sr. High School.

Fla., St Augustine—State Bd. of Control, P. K. Yonge, Chmn., Hotel White House, Gainesville, let contract to Keller Construction Co., Atlantic Natl. Bank Bldg., Jacksonville, for addition to central heating plant for Florida School for Deaf & Blind; Rudolph Weaver, Archt., 204 Peabody Hall, Gainesville. 7-3

Fla., Millville—Bay County Bd. of Public Instruction, Panama City, let contract at \$38,150 to H. H. Taylor, Blountstown, for school building.

Fla., Ocala—Bd. of Commrs. of State Institutions, Tallahassee, approved awarding contract for erection of \$25,000 laundry at Industrial School for Girls.

Ky., Livermore—Bd. of Education erecting \$25,000 high school addition; Duke Bros., Contr. 5-22

La., Forest—West Carroll Parish School Bd., Oak Grove, let contract at \$34,000 to D. E. Chapman, Weick Bldg., Baton Rouge, for 6 room addition and improvements to brick high school; built-up comp. roof, wood floors; The Clarence W. King, Archts., Giddens-Lane Bldg., Shreveport, and Bernhardt Bldg., Monroe. 7-3

La., Monroe—Ouachita Parish School Bd., T. O. Brown, Sec., let contract at approx. \$385,000 to Tudor & Ratcliffe, Commercial Bank Bldg., Alexandria, for 3-story and basement, rein. conc., brick and limestone trim high school; plumbing, heating and wiring, \$11,494, W. J. Riley, 805 S. Grand St., Monroe; J. W. Smith & Associates, Archts., Ouachita Natl. Bank Bldg. 7-10

La., Monroe—Ouachita Parish School Bd. let contract at \$91,994 to W. C. Salley, Ouachita Natl. Bank Bldg., for 3-story and basement, rein. conc., brick and stone trim annex to high school; plumbing and heating, \$29,800, to W. J. Riley, 805 S. Grand St.; J. W. Smith & Associates, Archts., Ouachita Natl. Bank Bldg. 6-12

La., New Iberia—St. Peter's College, Rev. J. M. Langlois, V. G., started work on addition for library to house 4000 volumes and physics, biological and chemical laboratories; Eugene Guillot, Contr.

La., Zwolle—Sabine Parish School Bd., Many, let contract at \$18,867 to Tudor & Ratcliffe, Commercial Bank Bldg., Alexandria, for boiler house and heating plant and installation heating system in high school, auditorium and domestic science cottage; J. W. Smith & Associates, Archts., Ouachita Natl. Bank Bldg., Monroe. 6-19

Miss., Bay St. Louis—St. Joseph Academy let contract at \$51,000 to Geary-Oakes Co., Queen & Crescent Bldg., New Orleans, La., for 2-story, 90x110 ft., brick gymnasium, auditorium, classroom and music room addition; E. F. Sporn, Archt., Vincent Bldg., New Orleans. 7-10

Miss., Gulfport—Gulf Park College, Dr. Richard G. Cox, Pres., let contract at \$10,850 to A. Ziegenfelder for brick and stucco addition to academic building; Shaw & Woleben, Archts. 7-10

Miss., Hattiesburg—Mississippi Building Comsn., W. C. Trotter, Sec., Jackson, let contract at \$16,420 to Weaver & Conn, Gulfport, for repairs to plumbing, heating, installations and marble work, and at \$11,300 to the Burckett Sheet Metal Co., Hattiesburg, for roofing and sheet metal work at State Teachers College; general contract for repairs to several buildings, amounting to \$12,500, was withdrawn to be readvertised so that sidewalks be included; Vinson B. Smith, Jr., Archt., Gulfport. 7-3

Miss., Rosedale — Rosedale Consolidated School Dist., J. H. Nutt, Supt., let contract at \$19,200 to O. B. Douglass Construction Co., Drew, for two annexes to school; brick, built-up comp. roof; Hull & Malvaney, Archts., Merchants Bank Bldg., Jackson. 7-10

Miss., Scooba—East Mississippi Junior College let contract at \$41,981 to McArthur & McLeomore, 611 22nd Ave., Meridian, for girls' dormitory; brick; P. J. Krouse, Archt., M. & W. Bldg., Meridian. 7-10

Miss., Scooba—Scooba Consolidated School Dist. Trustees let contract to McArthur & McLeomore, 611 22nd Ave., Meridian, for \$27,696 brick school.

Mo., Kansas City—School Bd. let contract at \$37,000 to J. E. Dunn Construction Co., Reliance Bldg., for first unit of elementary school, 64th St. and Agnes Ave.; 6 classrooms.

Mo., Pineville—School Bd. let contract at \$17,039 to B. O. Short, Pierce City, to erect addition nad remodel school.

Mo., Perryville—St. Mary's Seminary, reported, let contract to Gillespie & Daly, International Bldg., St. Louis for \$200,000, 4-story 75x200 ft. brick and rein. conc. dormitory; Henry P. Hess, Archt., Ambassador Bldg., St. Louis. 6-19

N. C., Madison—School Bd. let contract to J. R. Owen & Son, 1006 W. Lee St., Greensboro, for \$90,000, 2-story, brick, semi-fireproof, 18-classroom high school; limestone trim; auditorium to seat 800; Harry Barton, Archt., Jefferson Bldg., Greensboro. 5-22

Okl., Frederick—Bd. of Education, Consolidated Dist. No. 13, Will G. Weaver, Clk., let contract to Stacey & Fellers, Altus, for \$40,000, 1-story, brick and tile school; W. J. Laws & Co., Archts., First Natl. Bank Bldg., Oklahoma City. 6-19

Okl., Oklahoma City—Bd. of Education, J. G. Stearley, Clk., let contract to Leo Schmidt, 1512 E. 20th St., for Stan Watie School; Walter H. Vahlberg, Archt., Braniff Bldg.; also let contract to Shafer-Knox Construction Co., for \$115,000, 10-room school for Shidler Dist.; Leonard Bailey, Archt., Colcord Bldg. See Want Section—Building Material and Equipment. 7-10

Okl., Wewoka—Bd. of Education, Calvin Vance, Clk., let contract at \$22,705 to Cowen Construction Co., Shawnee, for 2-story, brick tile and conc. high school; Alvert S. Ross, Archt., Ada.

Tenn., Joelton—Davidson County Bd. of Education, Nashville, let contract at \$23,879 to Zopf Construction Co., Independent Life Bldg., Nashville, for 1-story brick school. 6-19

Tex., Highland Park, Dallas — Highland Park School Bd., H. E. Gable, Supt., started work on \$70,000 nine-classroom addition to Bradford School; Rogers & O'Rourke, Contrs., Construction Industries Bldg., Dallas. 5-22

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., let contract at \$56,000 to Rheiner & Kroeger, 305 Wyoming St., for brick and rein. conc. auditorium addition to Ralph Waldo Emerson Jr. High School; let contract at \$33,000 to W. H. Wolter, 1707 E. Commerce St., for 6-room, brick and rein. conc. addition to Mark Twain School; Leo M. J. Dielmann, 306 E. Commerce St., Archt. for both additions; Phelps & Dewees, School Archts., Gunter Bldg. 7-10 and 7-3

Tex., Kirbyville—Bd. of Education let contract at \$10,572 to W. O. Jemison, Beaumont, for remodeling school; Smith & Jones, Archts., Beaumont. 6-19

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., let contracts as follows for additions and repairs to 8 schools: R. C. Shane Co., 1026 N. Alamo St., at \$26,609 for Eleanor Brackenridge, David Burnett, Ben Milam, Stephen F. Austin, Brackenridge Elementary and Cuney schools; at

\$2385 to Allen & Allen, 217 Fredericksburg St., for Douglass High School; Phelps & Dewees, School Archts., Gunter Bldg. 6-26

Tex., Sugar Land—Sugar Land Ind. School Dist. Trustees let contract at \$18,666 to Shields-Blackburn Co., Houston, for 1-story, 70x47 ft. conc. and tile domestic science and art building; tile and wood floors, built-up asphalt and gravel roof; M. R. Wood, Engr., Sugar Land; work started.

W. Va., Huntington—State Bd of Control, Henry N. Bradley, Pres., Charleston, let contract at \$11,753 to General Fire-Proofing Co., Youngstown, Ohio, for installation stack and equipment in library at Marshall College; R. Mankin & Co., Contrs., 914½ Sixth Ave.; Meanor & Handloser, Archts., 1139 Fourth Ave. 2-3

W. Va., Lumberport—Eagle Dist. School Bd. let contract at \$10,870 to Leonard Riley Co., Shinnston, to complete high school.

W. Va., Bluefield—Raleigh County Bd. of Education, Beckley, let contract at \$9618 to M. T. Vipperman, Beckley, for second-story addition to Institute grade school; Garry & Sheffy, Archts., Bailey Bldg.

### Stores

Ala., Montgomery—Dr. George Blue, Bell Bldg., erect 2-story, brick store, 116 Catoma St.; stone trim, built-up roof; Hugger Bros., Construction Co., Contrs., 205 Parallel St.

Ga., Atlanta—Collins, Holdbrook & Collins, Trust Co. of Georgia Bldg., has permit for additions and repairs to building at 212 Mitchell St., S. W., damaged by fire, for Mildred Inman, 640 Peachtree St., N. E.; \$18,277, brick, tar and gravel roof; work started.

Okl., Oklahoma City — Robert M. Scott, 719 N. Hudson St., soon start work on \$10,000, 1-story, 75x55 ft., brick and conc. store; W. D. Palmer, Contr., 3121 N. McKinley St.; Tonini & Bramblett, Archts., 416½ Main St.

Tex., San Antonio—Van A. Petty, Sr. Estate, 10 10th St., let contract to Andrew Vogel, 319 Jones St., for 1-story, hollow tile and brick store, Sixth St. between Broadway and N. Alamo St.; cement floor, gravel roof; J. Clyde & Percy W. Williams, Archts., Moore Bldg.

La., Lake Charles—A. P. Pujos, 530 Bilbo St., let contract to P. Olivier & Son, 114 Bilbo St., for store, 705 Ryan St., to be leased to Jacobs Stores, Inc.; 2 stories, 30x105 ft., brick and stucco, oak floors; A. H. Humphrey, Archt., Lewis St. 5-29

Miss., Hattiesburg—Following sub-contracts awarded on \$100,000 store for S. H. Kress & Co., 114 Fifth Ave., New York, for which J. V. & R. T. Burkes, Inc., Am. Bank Bldg., New Orleans, La., have general contract: Steel sash, Detroit Steel Products Co., Southern Builders Co., Inc., Agent, Maison Blanche Bldg., New Orleans; terra cotta, Atlanta Terra Cotta Co., Ole K. Olsen, Agent, 325 N. Cortez St., New Orleans; waterproofing, R. N. Hibbard, New Orleans; Venetian blinds, Ray Nichols Co., 500 Fifth Ave., New York. 6-6

N. C., Charlotte—John Crostan, care Central Lumber Co., 300 S. Brevard St., completed excavation for stores, 704 E. Morehead St.; \$25,000; one story, 95x70 ft., brick veneer, wood floors; tar and gravel roof; Home Real Estate & Guaranty Co., Contr., 219 N. Tryon St. 7-10

Tex., Fort Worth—Fred T. Crimmons, 410 S. Jennings St., erect \$12,000, 2-story and basement, 37x46 ft., brick veneer store; comp. roof, oak floors; Elbert Jackson, Contr.

Tex., San Antonio—Travis Investment Co., M. A. Snyder, V.-P., Milam Bldg., let contract to Allen & Allen, 217 Fredericksburg Road, for improvements to store, N. Flores and Travis Sts.; Max Sandfield, Archt.; W. E. Simpson & Co., Engrs., both Milam Bldg.

### Theatres

Okl., Norman — A. W. Parr soon start work on \$30,000, 1-story, 10x140 ft., brick, stone and steel theatre and store; Barbour & Short, Contrs.; Griffith Amusement Co., Lessee. 6-19

Tex., Houston—Houston Little Theater, Leslie B. Dufton, Pres., 808 Anita St., started work on theater, Louisiana St. and Chelsea Blvd.; seat 330 people; J. H. Giesey, Archt., 3004 Milam St. 4-24

### Warehouses

Tex., Port Arthur—Phelan Grocery Co., Park and Washington St., Beaumont, has permit for 1-story, 50x140 ft., brick warehouse, 921 Houston Ave.; W. J. James, Contr., Port Arthur.



# WANT SECTION

## THE CLASSIFICATIONS IN THIS SECTION ARE:

### Machinery and Supplies

Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.

Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.

### Building Materials and Equipment

This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.

### Bids Asked

Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.

### Machinery and Supplies

**Clay Working Machinery.**—Breeze Hill Gardens, P. O. Box 88, Opelika, Ala.—Wants prices and data on machinery for making clay flower pots.

**Crane.**—Bristol Steel & Iron Works, Inc., Bristol, Va.—Wants prices and data on crane, hand operated, 5-ton, 25-ft. center to center of runways.

**Dry Ice Making Equipment.**—Marshall Moore, P. O. Box 1334, Greenville, S. C.—Wants prices and data from manufacturer of machinery for making dry ice.

**Engine (Diesel).**—Midland Mining Co., Tibbey, Ky.—Wants prices and data on Diesel or semi-Diesel type engine, about 200 to 250-h. p., for driving electric generator.

**Galvanizing Outfit.**—Oneonta Forge & Screw Co., Oneonta, Ala.—Wants prices and data on small galvanizing outfit, preferably for hot dip process.

**Road Roller.**—D. C. Elphinstone, Inc. (Construction Equipment), 120 S. Calvert St., Baltimore, Md.—Wants prices and data on used gasoline driven road roller with scarifier, 10 ton, 3 wheel, 4 cylinder.

**Samuel H. Baker & Co., Inc.** (Contractors and Builders), P. O. Box 289, Richmond, Va.—Wants prices and data on following:

- (1) Concrete Mixer— $\frac{1}{2}$  yd.
- (2) Electric Refrigeration Equipment.

**W. H. Bone, Jr.**, P. O. Box 427, Douglas Ga.—Wants prices and data on following:

- (1) Pumps—for pumping gasoline and kerosene from tank cars, used
- (2) Tanks—2 or 3 gasoline and kerosene, 10,000 to 15,000 gal. each; 4 tanks, 200 gal. each or one 4-compartment tank for lubricating oils, used.

### Miscellaneous

**Bristles (Brush).**—William E. Shaw, 720 Redgate Ave., Rocky Mount, N. C.—Wants prices and data on bristles for manufacturing cylinder brushes for machinery.

**Containers (Glass).**—Digestamint Laboratories, Inc., 1918 Dekle Ave., Tampa, Fla.—Wants prices and samples of glass containers, approx.  $\frac{1}{2}$ -oz. capacity, screw or metal caps, opening not less than  $\frac{1}{8}$  in., to contain 20 tablets  $\frac{1}{4}$  in. thick.

**Picture Frames.**—W. D. Shaw Convex Glass Co., 822 N. Oklahoma Ave., Okmulgee, Okla.—Wants prices and data from stamping firms on small metal picture frames, low price, 4x6 in.

**Pipe (Steam).**—The de la Howe State School, J. B. Branch, Supt., McCormick, S. C.—Wants prices and data on used wrought black iron pipe for steam, 1 $\frac{1}{4}$ , 2 and 3 in.

**Steel, Castings, Bronze, etc.**—Wright's Automatic Tobacco Packing Machine Co., Durham, N. C., establishing plant—Wants prices and data on cold roll steel, cold roll tool steel machine steel, steel castings, bronze castings, aluminum castings, sheet bronze, etc.

**Vacuum Sweeper.**—Jno. B. Harris, 1211 Independence Life Bldg., Nashville, Tenn.—Wants to contract with firm in position to manufacture portable vacuum sweeper; includes 6 to 10-ft. section of 1 $\frac{1}{4}$  in. stiff non-collapsible hose screwed on to hose ribs mounted on pair of wheels,  $\frac{3}{4}$  to 2-h. p. self-contained portable sweeper; 25 to 50-ft. sections 1 $\frac{1}{4}$ -in. non-collapsible rubber hose with intake nozzle for picking up dust, lint, etc., which is then forced along hose line, passing mounted wheeled sweeper and through 6 to 10-ft. section and into 14x14-in. vertical chute in which vacuum of 4 lb. per sq. in. is maintained by 2 vacuum exhaust fans; will later contract with same firm for manufacturing exhaust fans.

**Weighing Device.**—J. S. Costello & Son Brush Co., Costello Bldg., St. Louis, Mo.—Wants prices and data on device for weighing bristles and horse hair for use in brush making industry.

### Building Material and Equipment

**D. C. Bass & Sons, Gen. Contr.**, Enid, Okla., wants prices on following for \$350,000 office bldg. of Enid Investment Co.:

**Elevators**  
**Floors**—terrazzo and tile  
**Mail Chutes**  
**Marble**  
**Metal Doors**  
**Roof**—flat and built-up  
**Steel Sash and Trim**  
**Tile**—hollow and interior  
**Terra Cotta Trim**  
**Vault Lights**  
**Ventilators**  
**Wire Glass**  
**Brass and Bronze Work.**

**Geo. D. Waller, Archt.**, Independent Life Bldg., Nashville, Tenn., wants prices on following for \$57,000 high school:

**Flooring**—hardwood  
**Roofing**—built-up  
**Steel Sash and Trim**  
**Tile**—hollow  
**Ventilators.**

**Leonard H. Bailey, Archt.**, Colcord Bldg., Oklahoma City, Okla., wants prices on following for \$125,000 ward school:

**Cast Stone**  
**Dumb Waiters**  
**Flooring**—hardwood, terrazzo, tile, composition  
**Metal Doors**  
**Roofing (flat)**—built-up  
**Steel Sash and Trim**  
**Tile**—hollow  
**Ventilators.**

**Marvin N. Gay, Mt. Sterling, Ky.**, wants prices on following for garage:

**Door (Automatic)**—front, for opening 14 ft. high, preferably used, good condition.

**Samuel H. Baker & Co., Inc., Contr. and Bld.**, P. O. Box 289, Richmond, Va., wants prices on following:

**Roofing**—slate surfaced, car lots  
**Shingles**—Creo. Dipt.

**Shaw & Woleben, Archts.**, Gulfport, Miss., wants prices on following for \$12,000 classroom building for Gulf Park College:

**Roofing**—built-up.

### Bids Asked

**Boiler Tubes.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids July 25 for steam boiler tubes (assorted lengths), delivery Quantico, Va.

**Bridge (Timber).**—Love Point, Md.—See Construction News, Bridges, Culverts and Viaducts.

**Bridge.**—Memphis Tenn.—See Construction News, Bridges, Culverts and Viaducts.

**Coke.**—Marine Corps, Q. M. Dept., Washington, D. C.—Bids July 25 for 3 carloads (75 tons) coke, delivery Parris Island, S. C.

**Culvert Pipe, etc.**—U. S. Engr. Office, McCall Bldg., Memphis, Tenn.—Bids July 31 for corrugated galv. iron culvert pipe and joining bands.

**Dragline.**—Dallas County, Charles E. Gross, Auditor, Dallas, Texas.—Bids Aug. 11 for one dragline, 1-yd. capacity for use in Dist. No. 3; 1-yd. dragline to be traded in.

**Diesel Engine.**—See Power Plant Equipment.

**Dredging.**—U. S. Office, Mobile, Ala.—Bids Aug. 11 for dredging approx. 6,000,000 cu. yd. material, Mobile Bay Channel.

**Dredging.**—U. S. Engr. Office, Jacksonville, Fla.—Bids Aug. 9 for dredging approx. 15,300 cu. yd. material in main channel of approach to Cedar Keys Harbor, Fla.

**Dredging.**—U. S. Engr. Office, Norfolk, Va.—Bids July 25 for dredging approx. 1,425,382 cu. yd. material, place measurement, James River, Va., between Newport News and City Point.

**Dredging.**—Ch. Bureau of Yards and Docks, Navy Dept., Washington, D. C.—Bids July 30 for dredging at Naval operating base, Hampton Roads, Norfolk, Va.

**Dredging.**—U. S. Engr. Office, Wilmington, N. C.—Bids Aug. 15 for dredging approx. 5,568,975 cu. yd. material, southwest portion, Section III, Intracoastal Waterway, Beaufort to Cape Fear River, N. C., and for dredging approx. 6,363,020 cu. yd. material northeast portion, Section III.

**Electrical Equipment.**—U. S. Engr. Office, Huntington, W. Va.—Bids July 25 for electrical equipment for Dam. No. 20, Ohio River.

**Gravel.**—Louisiana Highway Comsn., O. K. Allen, Chmn., Baton Rouge, La.—Bids July 29 for washed and screened gravel, 40% sand-cay gravel, reef shell, clam shell, crushed limestone, slag and sand, as required for maintenance during August.

**Generator.**—See Power Plant Equipment.

**Grubbing, etc.**—Caddo Parish Police Jury, J. T. Bullen, 401 Courthouse Bldg., Shreveport, La.—Bids Aug. 1 for clearing and grubbing 6.7 mi. right of way and moving and building 151 stations of fence on Lakeshore Drive.

**Miscellaneous.**—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids July 23 for following, Sch. 2572:

Corrugated culverts, drill casing, bolts, washers, welding rods, pipe hangers and straps, cocks, valves, unions, cleanouts, water-closet chain and seats, etc.

**Motorcycles.**—State Highway Dept., Ben M. Sawyer, Ch. Commr., Columbia, S. C.—Bids July 21 for 15 motorcycles, for patrol use; f. o. b. Columbia.

**Paints.**—U. S. Shipping Bd., Washington, D. C.—Bids July 22, Pro. 254, for anti-corrosive, anti-fouling, boot topping, dark and light as required during 6 months period, beginning Aug. 1.

**Power Plant Improvements.**—City of Owensboro, Ky., A. L. Bishop, Supt. of Water and Light Plant—Bids July 21 for furnishing, delivery and erection at municipal light and power plant of 2 gaged steel smoke stacks and for furnishing and delivery of fab. struc. steel anchor posts, "A" forms and anchors; information on application to The Froelich & Emery Engineering Co., 410 Second Natl. Bank Bldg., Toledo, O.

**Power Plant Equipment.**—Town of West Point, Miss., T. B. Miller, Clk.—Bids July 22 for furnishing of Diesel engines sizes from 700 to 900 H. P. and standard electric alternating current generating direct connected, also exciter for same and necessary switchboard and accessories for engine.

**Roads, Walks, Etc.**—District Commrs., Room 509 District Bldg., Washington, D. C.—Bids July 23 for grading, construction of roads, walks and steps, seating and other work to fit site at Dunbar High School for athletic purposes.

**Roads.**—Maryland—See Construction News, Roads, Streets, Paving.

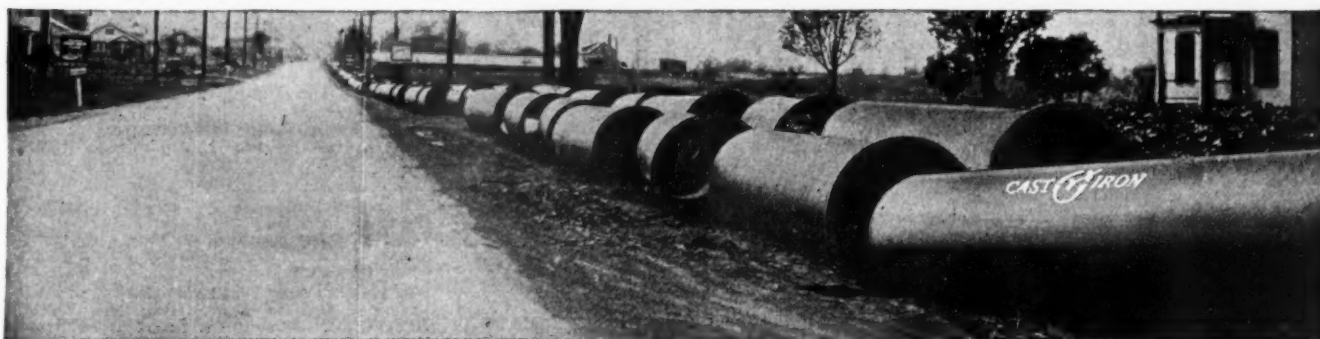
**School Equipment.**—Louisiana State School for the Deaf, Baton Rouge, La.—Bids Aug. 15 for tables, chairs, chair desks, teachers' desks, teachers' chairs, assembly chairs, home economics equipment office equipment, etc.

**Sewer Construction.**—City of Greenville, S. C., A. C. Mann, Mayor—Bids July 22 for sanitary sewers; work includes furnishing material, equipment and labor for 20,000 ft. of 8-in. to 10-in. sanitary sewers, manholes, etc.; Dan A. Hulick, City Engr.

**Steel Castings.**—U. S. Engr. Office, Huntington, W. Va.—Bids July 25 for steel castings, for U. S. Dredge Cincinnati.

**Timber (White Oak).**—U. S. Engr. Office, Huntington, W. Va.—Bids July 24 for white oak timber.

**Well.**—Construction Division, Veterans Bureau, Washington, D. C.—Bids July 22 for drilling, testing and finishing complete at U. S. Veterans Hospital one deep well.



## Large diameter cast iron mains in greater demand than ever...

The St. Louis County Water Co. has just completed an additional supply main, 8 miles long, entirely of 36 in. U. S. cast iron pipe.

The engineers responsible for this project specified cast iron mains for two important reasons: greatest durability and lowest maintenance costs. These men recognized the fact that cast iron pipe serves a century or more. They realized that over a period of years cast iron mains would be most economical. The use of large diameter U. S. cast iron mains by leading cities in all parts of the country is constantly



growing. In 1929 we produced more large diameter pipe than in any previous year. This year the demand continues to increase.

Every length of U. S. cast iron pipe is scientifically tested for strength and uniformity and bears the "Q-check" symbol of the Cast Iron Pipe Research Association. Let us send you the complete facts regarding the advisability of specifying U. S. cast iron pipe, including our facilities for emergency deliveries. Also inquire about deLavaud pipe which is centrifugally cast for greater strength and greater carrying capacity.

# United States Pipe and Foundry Co., Burlington, N.J.

Sales Offices:  
New York

Philadelphia  
Pittsburgh

Cleveland  
Buffalo  
Chicago

Our pipe bears the "Q-Check"  
trademark of The Cast Iron  
Pipe Research Association

Dallas  
Birmingham  
Kansas City

Minneapolis  
Seattle

San Francisco  
Los Angeles



# FINANCIAL NEWS

## Bond Issues Proposed

Ala., Fairfield—City, M. W. Pratt, Mayor, defeated \$100,000 bonds; \$50,000 schools; \$50,000 indebtedness. 6-26

Ala., Gadsden—City Council sell \$120,000 street improvement bonds on July 28.

Ala., Mobile—City Comsn. to consider \$500,000 bond issue for waterworks and sewer expansion, enlargement of city hospital.

Fla., Ormond—City, I. H. Sawyer, Mayor, to vote July 15 on \$100,000 refunding bonds.

Ga., Vienna—City, E. C. Taylor, Clk., voted \$15,000 bonds for extending sewerage and water mains; 5%, \$500 denom., probably sell around Aug. 1. 6-19

La., Amite—Tangipahou Parish School Board, J. H. Bently, Pres., receives bids Aug. 5 for \$200,000 Dist. No. 195 bonds; interest not to exceed 6%.

La., Cameron—Cameron Parish defeated \$125,000 bonds for courthouse and jail.

La., Jonesboro—Jackson Parish School Board, W. C. McClendon, Sec., receives bids Sept. 4 for \$40,000 bonds of Chatham Consolidated School Dist. No. 15; interest not to exceed 6%.

La., Mangum—Sub-Road Dist. No. 6 of Richland Parish voted \$100,000 road bonds.

La., Morgan City—City voted \$175,000 bonds for municipal power and light plant.

La., New Orleans—Board of Levee Comms., Orleans Levee District, A. L. Shushan, Pres., rejected bids on \$1,000,000 Ponchartraine lake front improvement bonds; to be sold at private sale, if acceptable bid is received.

La., Rayville—Richland Parish School Board ask bids Aug. 5 on \$225,000 bonds for high school at Rayville and grammar school at Holly Ridge.

La., Tallulah—Madison Parish Police Jury, P. O. Benjamin, Sec., receives bids July 23 for \$350,000, 5% public road and bridge bonds.

Md., Rockville—Montgomery County Comms., authorized \$36,000 bond issue for construction of Poolsville-Sycamore Landing Road.

Miss., Jackson—City Comsn. contemplates \$1,250,000 bond issue for public improvements, including schools.

Miss., Lexington—Holmes County vote Aug. 1 on \$30,000 bonds for school annex at Tehula.

Miss., Orange Grove—Orange Lake Consolidated School District voted \$20,000 bonds for school; Jackson County Bd. of Suprs., Pascagoula. 6-26

Miss., Raymond—Hinds County Board of Supervisors receives bids Aug. 4 for \$30,000 Forest Hill Consolidated School District bonds and for \$100,000 Series D courthouse and jail building bonds; information from W. Downing, Clk., Bd. of Suprs., Jackson.

Miss., Starkville—Oktibbeha Bd. of Supervisors, J. C. Page, Pres., and J. E. Buckner, Chancey Clk., plans selling \$16,000 Supervisors Dist. No. 1 bonds for roads.

Miss., Tupelo—Board of Aldermen probably call election during summer on bonds for swimming pool.

Mo., Jefferson City—State of Missouri sell \$5,000,000 road bonds about Aug. 1.

Mo., Lamar—City votes July 29 on \$20,000 bonds for filtration plant; Fidelity National Corp., Kansas City, contracted for purchase, if approved by voters.

N. C., Asheville—Buncombe County Bd. of Comms. called election Aug. 12 in Sand Hill School District on \$50,000 school bonds.

N. C., Dobson—Surry County Comms. offer \$72,000 school bonds on July 29; T. M. Marsh, Clk.

N. C., Greensboro—City, E. G. Sherrill, Clerk, plans \$240,000 refunding bond issue.

Okla., Oklahoma City—City, E. M. Fry, Mgr., include \$1,500,000 convention hall, \$150,000 fire station, \$250,000 detention hospital and \$60,000 comfort station bonds in proposed election on bonds for municipal improvements. 7-10

Okla., Sayre—City plans election on bonds for water works and sewer extension.

Tenn., Brownsville—City, R. Y. Moses, Clk., defeated \$120,000 sewer bonds. 6-19

Tenn., Chattanooga—City, H. D. Huffacker, Commr., canceled election called for Aug. 7 on \$600,000 to \$700,000 school bonds.

Tex., Carthage—Panola County, J. G. Strong, Judge, voted \$838,500 roads and refunding bonds; plan selling \$353,000, 5%, \$1000 denom. bonds. 6-5

Tex., Dallas—City, John Harris, Finance Commr., sell \$3,900,000, 4½% bonds during summer.

Tenn., Dandridge—Jefferson County Court contemplates \$100,000 road bonds.

Tenn., Rogersville—Hawkins County Court voted to issue \$68,000 road bonds, July 1931.

Tex., Beaumont—City Comsn. open bids July 22 for \$3,890,000 bonds for dock and wharf improvements, fire department, street opening, other municipal improvements.

Tex., Dimmit—City voted \$64,000 bonds to refund water works warrants.

Tex., Fort Worth—Bd. of Comms., Tarrant County Water Control and Improvement District, receive bids Sept. 15 on \$1,500,000 bonds; 4½, 4¾ or 5%.

Tex., Laredo—City, W. P. Galligan, probably vote early in 1931 on \$350,000 school bonds.

Tex., Rio Grande—Rio Grande Independent School District soon to vote on \$100,000 to \$150,000 bonds for schools.

Va., Rosslyn—Arlington County School Bd., Fletcher Kemp, Supt. of Public Schools, receives bids July 21 for \$510,000 school bonds.

W. Va., Charleston—State Bridge Comsn., plans selling \$1,900,000 bonds for toll bridge purchase on Aug. 1; two issues, one to be issued through Kanawha County and other through Mason County; bonds provided for under Bridge Act can be issued only by counties.

W. Va., Malden—Malden District of Kanawha County defeated \$110,000 school bonds; R. O. Samples, Supt. of Schools. 6-12

## Bond Issues Sold

Ark., Fort Smith—City Comsn. sold \$14,500, 6% paving bonds of improvement Dist. 44 to City National Bank at 95 and accrued interest.

Ark., Little Rock—State Note Board, Ralph Koonce, State Treas., sold \$18,000,000 4¾% road bonds at 99.78 to syndicate headed by Halsey, Stuart & Co., Inc., Chicago, and including E. H. Rollins & Sons, Bancamerica-Blair Corp., Chatham Phenix Corp., Eldridge & Co., A. B. Leach & Co., R. W. Pressprich & Co., B. J. Van Ingen & Co., Redmond & Co., Darby & Co., all New York; Commerce Trust Co., both Kansas City, Boatmens National Co., Stifel Nicolaus & Co., and Stix & Co., all three St. Louis, and group of Arkansas banks, including Merchants & Planters Bank, National Bank of Arkansas, both Pine Bluff, Merchants National Bank, & First National Bank, both Fort Smith, and W. B. Northern Co., Little Rock.

La., Lake Charles—Comms. of Gravity Drainage Dist. No. 3 sold \$85,000 drainage bonds to Calcasieu Investment Co. at par and accrued interest.

Miss., Hazlehurst—City Council sold \$43,500 sewer and paving bonds to A. K. Tigaret Co., Memphis, Tenn.

N. C., Lexington—City Commission sold \$125,000 5¼% bonds at premium of \$1075 to Seipp, Princell & Co., 105 S. La Salle St., Chicago, Ill. 6-26

N. C., Williamston—Town, R. L. Coburn, Mayor, sold \$40,000, 6%, street improvement serial bonds at \$430 premium to R. L. Durfee & Co., Toledo, Ohio; Julius S. Peel, Attorney. 5-29

Tenn., Knoxville—City, John C. Borden, Director of Finance, sold \$1,000,000, 2¼% City Revenue refunding notes to Chase National Bank, New York.

Tex., Amarillo—City, Lela Krebs, Sec., sold \$175,000, 5%, \$1000 denom. bonds at par and accrued interest plus \$1750 premium to Dallas Union Trust Co., Dallas, and C. W. McNear & Co., Chicago; \$150,000, paving; \$25,000, parks. 6-26

Tex., Ozona—Crockett County sold \$375,000, 5% road bonds at par to Central National Bank, San Antonio.

Va., South Boston—Town, J. L. Hardy, Treas., sold \$100,000, 5% funding and refunding bonds to First Detroit Co., Detroit, Mich., at \$109,585; J. B. Wilborn, Mayor.

## New Financial Corporations

Ky., Wilmore—First American Bank of Wilmore, capital \$25,000, chartered; J. E. Fisher, George E. Woods.

La., Lake Charles—Calcasieu Investment Co., capital \$120,000, chartered; Frank Roberts, 703 Julio St., pres.; Robert L. Hale, 1026 Kirby St., Sec.

N. C., Asheville—Peoples Loan and Secu-

rity Co., capital \$100,000, incorporated; W. E. Snow, I. M. Lassiter.

Tex., Brady—Commercial Livestock Loan Co., capital \$26,000, incorporated; G. R. White, W. D. Crothers.

Bank of Monongahela Valley, Union Bank and Trust Co. and the Federal Savings and Trust Co., Morgantown, W. Va., negotiating to consolidate under name of Bank of Monongahela Valley.

Benton County National Bank and First National Bank of Bentonville, both Bentonville, Ark., consolidated; J. G. Andrews, Pres.

Citizens Bank, Okeechobee, Fla., started operating with H. L. Chandler, Pres., and D. S. Hudson, V. P. and Cashier.

Commercial Bank, Hume, Mo., started operating; consolidation of Hume Commercial Bank and Hume State Bank.

Farmers and Drivers Bank and the Deposit Bank of Eminence, both Eminence, Ky., consolidated into the Farmers Deposit Bank of Eminence with \$40,000 capital and \$40,000 surplus.

First National Bank, Birmingham, Ala., formed by merger of First National and American Traders National Bank, has started operating, with capital and surplus of \$10,000,000.

First National Bank, Neosho, Mo., acquired Bank of Ritchey, Newton County, Mo.

Home Mortgage Co., Durham, N. C., move main office to Hickory; D. T. Applegate, V. P.

Peoples' State Bank of South Carolina, R. Goodwyn Rhett, Jr., Charleston, S. C., purchased Farmers Bank of Edgefield and Bank of Edgefield, both Edgefield, S. C.; to be consolidated and operated as branch of Peoples' Bank.

Socarnat Bank Corp., Robert S. Small, Pres., Charleston, S. C., acquired substantial stock interest in Merchants and Farmers National Bank, Charlotte, N. C.; Socarnat Bank controls 22 banks in South Carolina with capital assets of more than \$5,500,000 and resources of more than \$50,000,000; Merchants and Farmers National has capital of \$200,000, and resources of \$3,000,000.

State and City Bank of Roanoke, Va., authorized to acquire capital stock of State and City Investment Corp.

State Bank and Trust Co. and Fidelity Bank of New Smyrna, both New Smyrna, Fla., merged with total resources of more than \$1,500,000; R. J. Christy, Chmn. of Bd.

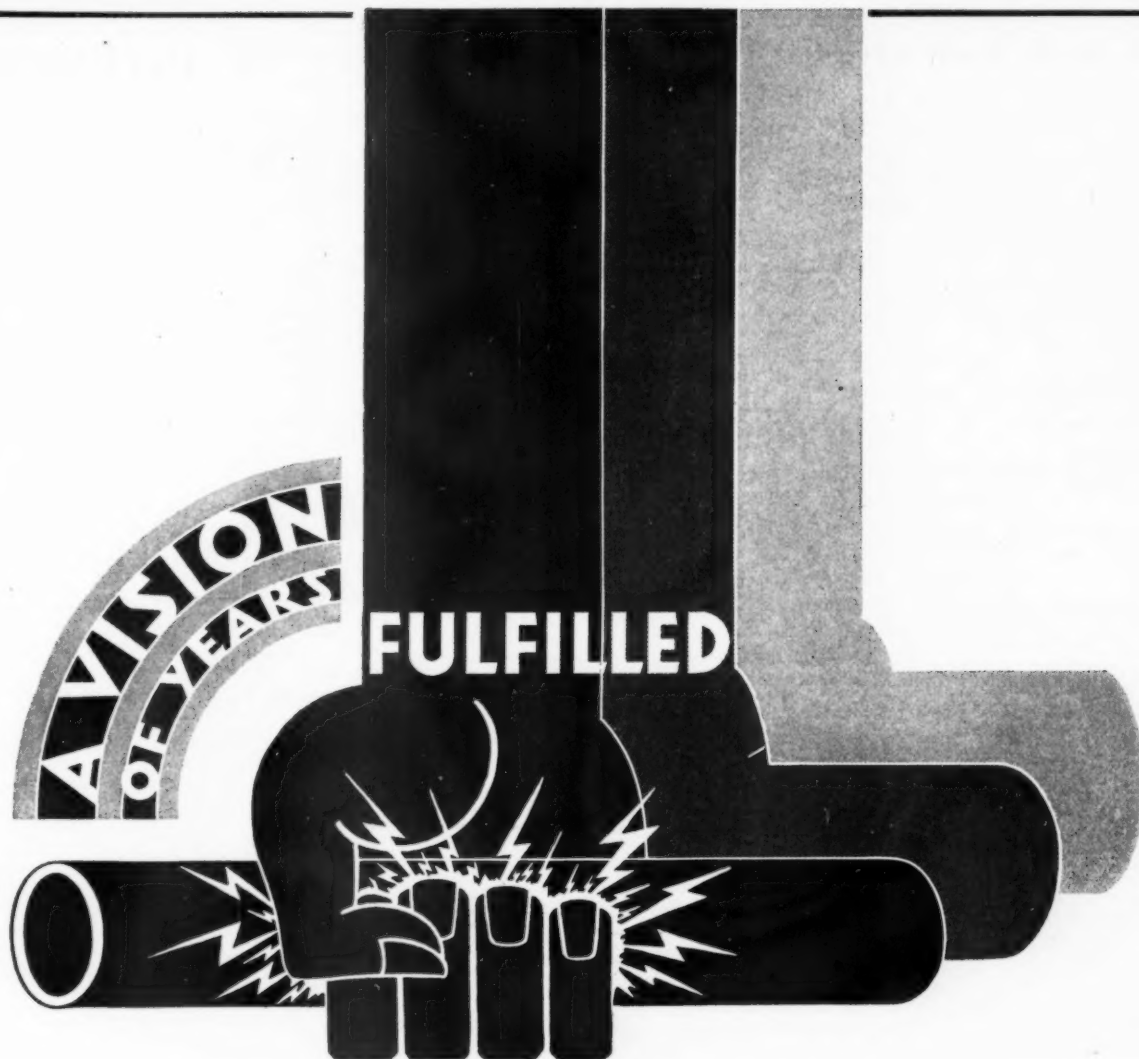
Union Trust Co., Shelby, N. C., to open branch in Mooresboro section; W. L. Hicks, Caroleen, in charge.

## Monighan Profits Show Increase.

For the five months of 1930 ended May 31, net profits of the Monighan Manufacturing Corp., Chicago, manufacturer of excavating machinery, amounted to \$98,968, as compared with \$27,000 for the corresponding period in 1929, according to a report of the company. This was equivalent to a dividend of \$1.31 on 40,000 no-par shares of class A common stock and 94 cents on 40,000 shares of no-par class B stock, as compared with 68 cents on class A stock in the first five months of 1929. Sales for the five months of 1930 amounted to \$518,773 as against \$264,915 for the corresponding period in 1929.

## Utility Company Earnings Increase.

For 12 months ended May 31, 1930, the net earnings from operation of the Houston Lighting & Power Company, Houston, Tex., amounted to \$4,062,116, as compared with \$3,393,546 for the corresponding period ended May 31, 1929. Gross earnings from operation for the year ended May 31, 1930, aggregated \$8,399,088, as against \$7,513,596 for a similar period ended May 31, 1929, while the balance before the payment of dividends on preferred stock amounted to \$3,035,137, as compared with \$2,467,638. Total income for the year ended May 31, 1930, was \$4,106,548, as compared with \$3,425,189 for the year ended May 31, 1929.



FULFILLED

**REPUBLIC**  
***ELECTRIC WELD***  
**PIPE**

MADE BY A NEW PROCESS  
CONTROLLED EXCLUSIVELY BY  
REPUBLIC STEEL CORPORATION  
YOUNGSTOWN, OHIO . . . .





**\$1,900,000 Bridge Bonds Offered**

Charleston, W. Va.—The first issue of state bridge bonds approximating \$1,900,000 will be offered August 1 by the State Bridge Commission for the purchase of the Cabin Creek toll bridge and for procuring rights and building bridges at St. Albans and Point Pleasant across the Kanawha River. The commission has contracted for the purchase of the Cabin Creek bridge from the Midland Trail-Kanawha River Bridge Co., owners, and for the Point Pleasant bridge with the St. Albans-Nitro Bridge Co. and the Henderson-Point Pleasant Bridge Co. As the bridge act provides that bonds may only be issued by counties, the commission plans to sell one issue through Kanawha County and the other through Macon County. Negotiations for other bridges are under way and more bonds will be issued as required. The bridges will continue as toll bridges under state control until the bonds are retired, when they will become free.

**\$18,000,000 Arkansas Road Bonds**

Little Rock, Ark.—Bonds in the amount of \$18,000,000 have been sold by the State of Arkansas to a syndicate headed by Halsey, Stuart & Co., Chicago, at a price of 99.78. They were sold as 4½s, the proceeds to be used by the state in forwarding its highway construction program.

**\$1,250,000 Club Building**

Oklahoma City, Okla.—Plans are being prepared by Walter T. Vahlberg, local architect, for a 12-story building for the Oklahoma City Athletic Club, H. V. Trigg, director, to cost about \$1,250,000. The structure will contain dining rooms, gymnasiums, swimming pools, hotel rooms, ballroom and auditorium to seat 5000.

**Plans for \$600,000 Red Cross Building**

Washington, D. C.—Plans and specifications are expected to be completed within three months for the proposed \$600,000 building here for the American Red Cross. It will be a government building and its construction will be handled by the office of Public Buildings and Public Parks of the National Capital, D. H. Gillette, chief of the engineering division. The structure will be 6 stories, 60 by 225 feet, of structural steel, reinforced concrete and marble. Trowbridge & Livingston, New York, are the architects.

**INDUSTRIAL NEWS OF INTEREST**

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers, whether they are advertisers, or subscribers, or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

**Made Vice President and Sales Director.**

The board of directors of Jenkins Bros., New York, manufacturers of valves, packing and mechanical rubber goods, announce the election of James R. White as a vice president of the corporation and his appointment as director of sales.

**Combines Sales and Service.**

The Wagner Electric Corp., St. Louis, Mo., announces the combination of the sales office and service station for the Atlanta territory and the installation of both in the new fireproof building at 14-20 Alexander street, N. W., Atlanta, Ga.

**Fuller Lehigh Sales Office.**

The Fuller Lehigh Company, of Fullerton, Pa., manufacturers of pulverized-coal firing equipment and Bailey water-cooled furnace walls, announces the opening of a new sales office in the Candler Building, Atlanta, Ga., in charge of J. C. Hill.

**New Chicago Representative**

The Chicago Pump Company, Chicago, Ill., has appointed R. J. Welsh, 503 Healy Building, Atlanta, Ga., as its representative. This company manufactures sewage, condensation, circulating, bilge, fire, house and vacuum pumps.

**Movie Talks About Wire Rope.**

The American Steel & Wire Company, Chicago and New York, a subsidiary of the United States Steel Corporation, recently staged a successful "talkie" motion picture featuring a trip through the mills in which wire rope is manufactured. Every stage of the process is visible on the screen and is orally explained in a detailed and impressive manner.

**Trustee's Sale of Spinning Mill.**

Pursuant to an order of the United States District Court, Carl H. Hart, York, S. C., trustee of the Bowling Green Spinning Mills, Bowling Green, S. C., will sell at public auction on August 5, all real and personal property of the mill. The mill building is 284 by 60 feet, on a tract of nearly 34 acres, and is equipped with 20 spinning frames, 252 spindles and complementary machinery. There are also 29 tenant houses, two warehouses, six garages and other structures. Power is supplied by the Duke Power Company, all wiring and transformer houses being in place.

**Sale of Furniture Factory.**

The factory, stock in process, finished furniture, lumber, supplies and other property of the Stoneville Cabinet Company, except accounts receivable, will be sold at receivers' sale on July 26 at the office of the company at Stoneville, N. C. The plant occupies about 30 acres of land, on which there are nine tenant houses and other buildings. It is located on the Norfolk & Western Railway and on a hard-surfaced highway. Information may be obtained from J. Hampton Price, Leaksville, N. C., and C. G. Miller, Stoneville, receivers.

**Frey Steel Products Company.**

E. C. Frey, formerly general manager and treasurer of the Harrisburg Pipe & Pipe Bending Company, Harrisburg, Pa., has organized the Frey Steel Products Company for the manufacture and sale of light weight sections, such as angles, channels, flats, etc. The company's plant is at Milton, Pa., and its offices at 620 Lewis Tower, Philadelphia. The Pearce Fireproof Company, Philadelphia, is the distributor.

**Trade Literature**

**Automatic Arc Welding.**—A 40-page booklet entitled "Automatic Arc Welding by the Electronic Tornado Process" has been issued by the Lincoln Electric Company, Cleveland, Ohio, manufacturers of Stabile Arc welders and Linc-Weld motors. The publication describes in detail the advantages of this process and presents data of tests.

**Industrial Illumination.**—Published jointly by the Westinghouse Lamp Company and the Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a booklet, No. 1885, entitled "The Way Out of the Twilight Zone" points to that degree of lighting which permits maximum operation efficiently in factory and office. It presents descriptions of various types of lighting equipment and gives instructions for designing good systems of interior lighting.

**Market Analysis.**—The Louisville Industrial Foundation, Inc., Louisville, Ky., has issued a booklet on market analysis, designed to point out economies pertinent to the marketing requirements of every type of industry. It presents figures taken from authoritative sources, which indicate market possibilities within a radius of 500 miles of Louisville, and outlines some outstanding advantages the city offers for the establishment of industries.

**Culvert and Drainage Practice.**—For several years the Armeo Culvert Manufacturers Association, Middletown, Ohio, has been engaged in the preparation of a handbook to contain all available data pertaining to drainage. The book has now been completed and presents a large amount of information regarding the underlying principles of drainage and deals with specific applications of drainage and under-drainage to roads, streets, railways and municipal improvements.

**Southwest Market.**—A new book entitled "The Southwest Market" is being distributed by Industrial Dallas, Inc., Dallas, Tex., which presents in usable form accurate information regarding the Southwest—its remarkable economic development, present importance as a market and its future possibilities. Figures are presented to show population and present buying power of the Southwest and to indicate trends pointing to a tremendous development of that section within the next ten years.

**T O B E S O L D,** A Valuable Farm, situated in  
Public Vendue, on Wednesday the 10th of  
March next, it not disposed of before at pri-  
vate sale;  
**THAT** excellent House and Store, late the  
estate of the late Theodorus,  
in which he lived—its situation is  
commanding a view of the shipping  
from the wharves, and  
it has great conveniences set  
Duke Street, landed  
voluntarily, especially fine  
city water.  
any information  
at No. 33.

**BANK.**

**I**T appearing to be the disposition  
of the Gentlemen in this City,  
to establish a BANK on liberal prin-  
ciples, the stock to consist of specie  
only; they are therefore hereby invit-  
ed to meet To-Morrow Evening at Six  
o'Clock, at the Merchant's Coffee-  
House; where a plan will be submit-  
ted to their consideration.

XXXXXXXXXXXXXXX

One hundred and forty-six years ago this small Notice appeared on an inside page of the New York Packet and American Advertiser. In such *modest terms* was announced the Meeting which, held the following day, led to the establishment of the Bank of New York—the *first* Bank in the City and now the *oldest* in the Country.

SINCE ITS INCEPTION THE BANK OF NEW YORK and TRUST COMPANY has adhered *consistently to the purpose of its founders*—to provide facilities in keeping with the times. Each forward step has coincided with the development of new requirements on the part of

industry, commerce or individuals  
for banking service.

ITS ORGANIZATION today, free from extraneous growth and with the *experience of years supporting the work of each department*, presents an exceptional equipment for the discharge of all true banking functions.

BANK *of* NEW YORK *and* TRUST COMPANY

CAPITAL, SURPLUS, AND UNDIVIDED PROFITS \$20,000,000

NEW YORK  
CLEARING HOUSE  
MEMBERSHIP  
NUMBER ONE

48 WALL STREET, NEW YORK

*Uptown Office:* Madison Avenue at 63rd Street





**HERE YOU FIND  
COOPERATION and CONSERVATISM**

which is proving good for both  
borrowers and depositors, and  
may be called the keystone of  
our success.

**BALTIMORE COMMERCIAL BANK**

GWYNN CROWTHER, President

26 South Street, Baltimore, Md.

Capital and Surplus \$1,350,000.00

Member Federal Reserve System

WE PURCHASE ISSUES OF SPECIAL ASSESSMENT BONDS  
AND ADVANCE FUNDS TO RESPONSIBLE CONTRACTORS  
ACCOUNT CONSTRUCTION COSTS SUCH ISSUES

CORRESPONDENCE WITH US INVITED

**S. G. GARRAWAY & COMPANY**

208 SO. LA SALLE ST. - CHICAGO, ILLINOIS

**SOUTHERN  
TEXTILE SECURITIES**

**A. M. LAW & COMPANY**

Established 1892

Spartanburg, S. C.

**DELAWARE CORPORATIONS**

ORGANIZED

REPRESENTED

Registered in Other States

"DIGEST" OF DELAWARE CORPORATION LAW with forms  
for incorporating, also pamphlet on "Stock Without Par Value  
under Delaware Law" on request.

**NEW EDITION**

(With 1929 Amendments and Annotations  
to date)

**DELAWARE CORPORATIONS  
AND RECEIVERSHIPS**

by Josiah Marvel

Text of law, fully annotated, with Forms for  
organizing Delaware Corporations

Backram Bound 358 Pages

Price \$5.00 Postpaid

**Corporation Service Company**

318 Delaware Trust Building

Tel. Wilmington 8305

Wilmington, Delaware

**WE** extend the facili-  
ties of our organi-  
zation to those desiring  
information or reports  
on companies with  
which we are identified.

**Electric Bond and  
Share Company**

Two Rector Street

New York

**Corporate Financing  
Arranged**

**Mergers and Reorganizations Effected**

With connections seeking extensive out-  
lets in constructive financing in the South,  
this announcement of facilities now avail-  
able to Southern business houses em-  
braces a most cordial invitation to investi-  
gate the solutions offered in response to  
capital needs. Capital furnished for both  
new and old enterprises.

**WILLIAM AKERS**

Long Distance Local Phone

Walnut 3186

1314-15 Atlanta Trust Co. Bldg.

ATLANTA, GEORGIA

**We Buy Bonds**

City, County, School and Road from  
Municipalities and Contractors

WRITE

**THE PROVIDENT SAVINGS BANK & TRUST CO.**  
CINCINNATI OHIO

W. O. GAY

H. D. MONTGOMERY

G. C. DEMORSEY

MUNICIPAL NOTES

COMMERCIAL PAPER

COLLATERAL LOANS

**W. O. GAY & CO.**

Est. 1894

27 William Street, New York

53 State Street, Boston

1418 Walnut Street, Philadelphia

**THE OSCAR T. SMITH & SON CO.**

Manufacturing

**BANK AND COMMERCIAL STATIONERS**

407-9-11 E. Saratoga Street

BALTIMORE, MD.

CHARACTER

QUALITY

— SERVICE —

### Southern Textile Exposition Building Enlarged to Meet Space Demands

The Fiske-Carter Construction Company has started work on a temporary Annex for the ninth Southern Textile Exposition at Greenville, S. C., to meet the demand for space. The new building will be of heavy mill construction 130 feet long and 40 feet wide. It will be connected with the ground floor of Textile Hall and the steel Annex so that the Exposition will appear to be housed practically in one building.

The transformer station in the rear of the building has been rebuilt. Additional heavy duty switches are being installed, and a wire fence built around these high tension terminals. A great deal of concrete work has been finished, providing for complete drainage for surface water.

Electricians are removing overhead lamp cords on the second floor and replacing them with modern fixtures. A number of new small lights have been installed.

The management announces that exhibitors who desire to install heavy machinery may begin work a month before the Exposition opens without additional charges for space.

### Contract for \$750,000 Hospital

Gadsden, Ala.—Operating the Holy Name of Jesus Hospital here, the Missionary Servants of the Most Blessed Trinity have awarded general contract to the Foster & Creighton Co., Birmingham, to erect a new \$750,000 hospital. Plans by Schmidt, Garden & Erikson, Chicago, call for a 6-story and tower structure, 130 by 90 feet, with two wings 39 by 35 feet. The building will accommodate 120 beds and will be served by elevators. Contracts for plumbing, heating, lighting, elevators and other equipment are yet to be awarded.

### Bids for \$600,000 School

St. Joseph, Mo.—Revised plans for a \$600,000 senior high school building here have been approved by the Board of Education and construction bids will be opened August 7. The main front of the building will be 265 feet long; the rear portion 380 feet, and the overall width 248 feet. It will be two and three stories, of reinforced concrete, brick and stone, and will accommodate 1200 students. Eckel & Aldrich, St. Joseph, are the architects and William B. Ittner, Inc., St. Louis, associate architect. Walter E. Gillham, Kansas City, Mo., is the consulting engineer.

### Machinery for \$2,210,000 Coal Pier

Newport News, Va.—Contract for machinery for the new coal pier being erected here for the Chesapeake and Ohio Railway Co., Richmond, at a cost of approximately \$2,210,000, has been awarded to the Industrial Brownhoist Corporation, Cleveland, Ohio. This machinery will be capable of dumping fifty 120-ton coal cars per hour, a mechanical trimmer to be used in trimming the ships. About ten months will be required for the completion of the pier which will be 1000 by 70 feet, to consist of a concrete dock supported by concrete piles. Construction contract was awarded several weeks ago to the W. Horace Williams Co., New Orleans, La.

### \$650,000 Improvements for Soldiers' Home

Johnson City, Tenn.—Plans are being made for an addition to the Mountain branch here of the National Home for Disabled Volunteer Soldiers, Dayton, Ohio, which will involve the construction of an additional barrack to accommodate 350, and wings to the hospital building to accommodate 100 additional beds. Congress recently appropriated \$650,000 for the improvements. George H. Wood, Dayton, is president of the board of managers of the National Home.

### \$800,000 University Building Program

University, Va.—An outlay of approximately \$800,000 is involved in a building program for the University of Virginia, Dr. Edwin A. Alderman, president, the work to embrace a \$300,000 stadium, \$175,000 nurses' home, \$75,000 addition to the chemical laboratory and a \$250,000 law building. The program is in charge of an architectural commission composed of Walter D. Blair, New York; R. E. Lee Taylor, Baltimore; Edmund S. Campbell, Professor of Architecture at the University, and John Kevan Peebles of Norfolk, who is the chairman. General contract was recently awarded to J. R. Jones & Conquest, Richmond, for the stadium, the contract being executed directly by Frederic W. Scott, Richmond, the donor. The structure will seat 75,000 and is expected to be completed by the last of November. Plans and specifications will probably be complete by the last of July for the nurses' home; about the middle of August for the proposed addition to the chemical laboratory, and early in the fall for the Clark memorial law building.

### WORK ON FLORIDA EAST COAST CANAL

#### 605,000 Cubic Yards of Material Moved

Jacksonville, Fla.—According to the office of the United States District Engineer in this city, maintenance dredging on the intracoastal waterway from Mayport, near Jacksonville, to Miami, for the purpose of securing a usable channel 5 to 6 feet deep and 60 to 75 feet wide, pending completion of the waterway to full project dimensions of an 8-foot depth at mean low water and a 100-foot width, is progressing. The United States dredge Congaree was put on the work March 27, 1930, and there are now 9 hydraulic pipe line dredges at work with two more to be placed within a few days. In addition arrangements have been made for the transfer of the United States hydraulic dredge Pullen from the Norfolk district for work on the canal, and bids have been opened for a dredging plant to consist of a bucket machine, two dragline machines and other equipment for work in the vicinity of Delray, south of Lake Worth.

From the St. Johns River to St. Augustine, two dredges and two snagboats are at work and from Matanzas Inlet to the Halifax River three dredges are working. Other work is proceeding as follows: Ponce de Leon Inlet to the Indian River, one dredge at work and one en route; south end of Lake Worth to Hillsboro Inlet, one dredge at work, one en route, and a bucket dredge soon to be obtained; Hillsboro Inlet to Fort Lauderdale, one dredge at work, and from Fort Lauderdale to Biscayne Bay, there is one dredge at work. Up to July 1 a total of 605,880 cubic yards of material had been removed.

In order that maintenance work may proceed without interruption, the Florida Inland Navigation District, of which Charles E. Burgman of Daytona Beach is chairman, is endeavoring to secure from owners of lands along the waterway permission to deposit the dredged material. Failure to obtain this permission, it is said, will mean that no dredging can be done in that particular section. Where necessary, a priority schedule will be established in each section in order that the most obstructive shoals may be removed first and the order of work regulated with a view to having the waterway in the best condition possible for the coming winter.

The transfer of the canal to the United States Government was effected around the first of this year, the Florida Inland Navigation District purchasing it and turning it over to the Government, which agreed to expend \$4,125,000 for deepening and widening it and \$125,000 annually for maintenance.





# PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS



Bids close August 11, 1930.

U. S. Engineer Office, Mobile, Ala. Sealed bids, in duplicate, subject to the conditions contained in the specifications, will be received until 11 o'clock A. M., August 11, 1930, and then publicly opened, for furnishing all labor and materials and performing all work of dredging approximately 6,000,000 cubic yards of material in the Mobile Bay Channel. Further information on application.

Bids close August 15, 1930.

U. S. Engineer Office, Wilmington, N. C. Sealed bids, in duplicate, will be received until 12 o'clock noon, August 15, 1930, and then publicly opened, for furnishing all labor and materials and performing all work for dredging approximately 5,568,975 cubic yards of material in southwest portion of Section III of the Intracoastal Waterway from Beaufort to Cape Fear River, N. C. Further information upon application.

Bids close August 5, 1930.

U. S. Engineer Office, 300 Custom House, Baltimore, Md. Sealed proposals will be received here until 3 P. M., Eastern Standard Time, August 5, 1930, and then publicly opened, for dredging approximately 1,174,341 cubic yards of material to a minimum depth of 37 feet over a width of 300 feet in Cut-off and a part of the Brewerton sections of channel leading to Baltimore, Maryland.

Bids close August 15, 1930.

U. S. Engineer Office, Wilmington, N. C. Sealed bids, in duplicate, will be received until 12 o'clock noon, August 15, 1930, and then publicly opened, for furnishing all labor and materials and performing all work for dredging approximately 6,363,020 cubic yards of material in northeast portion of Section III of the Intracoastal Waterway from Beaufort to Cape Fear River, N. C. Further information upon application.

Bids close August 12, 1930.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., July 8, 1930.—SEALED PROPOSALS will be opened in this office at 3 p. m., August 12, 1930, for furnishing all labor and material required for a pumping plant in the receiving and detention building at the U. S. Immigration station, Baltimore, Md. The successful bidder will be required to furnish a performance bond of 50% of the contract price. Specifications may be obtained from this office. JAS. A. WETMORE, Acting Supervising Architect.

Bids close July 30, 1930.

Office of the Executive Officer, Arlington Memorial Bridge Commission, Navy Building, Washington, D. C. Sealed bids will be received in this office until 11 A. M. (Eastern Standard Time), July 30, 1930, and then publicly opened in Room 1613 Navy Building, for the construction of the fenders for the Bascule Draw Span of the Arlington Memorial Bridge. Approximate quantities of finished work are: Reinforced concrete, 100 cubic yards; reinforcing steel, 10 tons; structural timber, 60 M.B.M.; concrete piles, 600 linear feet; wood piles, 10,700 linear feet. Further information upon application.

Bids close August 8, 1930.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., July 11, 1930.—SEALED BIDS will be opened in this office at 3 p. m., August 8, 1930, for the construction of the U. S. post office at Parkersburg, W. Va. Drawings and specifications, not exceeding six sets, may be obtained at this office, in the discretion of the supervising architect, by any satisfactory general contractor, and providing a deposit of \$25.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. JAS. A. WETMORE, Acting Supervising Architect.

## GENERAL INFORMATION

### About Proposal Advertising in Manufacturers Record

PUBLICATION DAY: Thursday.  
FORMS CLOSE: 10 A. M. Tuesday.

When too late to send copy by regular mail to reach us by 10 A. M. Tuesday, forward by night letter or air mail when possible.

### THE DAILY CONSTRUCTION BULLETIN OF THE MANUFACTURERS RECORD

Published every business day, gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Construction Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened or when daily insertions are necessary to meet legal requirements.

The rate is the same for both publications—35 cents a line each insertion.

Bids close July 23, 1930.

TREASURY DEPARTMENT, office of the supervising architect, Washington, D. C., July 9, 1930.—SEALED PROPOSALS will be opened in this office at 3 p. m., July 23, 1930, for furnishing all labor and material required for new boiler, etc., in the U. S. post office at Washington, N. C. Especial attention is called to the fact that time of completion, as well as price, will be considered in awarding contract. Drawings and specifications may be obtained from the custodian at the U. S. post office at Washington, N. C., or at this office, in the discretion of the supervising architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close July 29, 1930.

SEALED BIDS, in triplicate, subject to the conditions contained herein, will be received by the U. S. Veterans' Bureau, Room 764, Arlington Building, Washington, D. C., until 11 A. M. July 29, 1930, and then publicly opened, for furnishing all labor and materials and performing all work required for constructing and finishing complete at U. S. VETERANS' HOSPITAL, NORTH CHICAGO, ILLINOIS, C. T. BUILDING, OFFICERS' QUARTERS AND ALTERATIONS TO Dining Hall, etc., including roads, walks, grading and drainage. This work will include excavating, reinforced concrete construction, hollow tile, brick work, cut stone, cast stone, marble work, floor and wall tile, rubber tile, mastic and linoleum floors, iron work, steel sash, steel stairs with slate treads, steel clothing bins, slate, metal and built-up roofing, roof ventilators, skylight, metal lathing, plastering, carpentry, metal weatherstrips, insect screens, window shades, painting, glazing, hardware, plumbing, refrigeration, heating, electrical work and outside sewer, water, gas, steam and electric distribution systems. Bids will be considered only from individuals, firms or corporations possessing satisfactory financial and technical ability, equipment and organization to insure speedy completion of the contract, and in making awards the records of bidders for expedition and satisfactory performance on contracts of similar character and magnitude will be carefully considered. At the discretion of the Director, drawings and specifications may be obtained upon application to the Construction Division, Room 764, Arlington Building, Washington, D. C. Deposit with application of a check or postal money order for \$50.00, payable to the TREASURER OF THE UNITED STATES, is required as security for safe return of the drawings and specifications within ten days after date of opening bids. FRANK T. HINES, Director. June 27, 1930.

Bids close July 31, 1930.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., July 2, 1930.—SEALED BIDS will be opened in this office at 3 P. M., July 31, 1930, for certain changes for elevator hatchway, etc., in connection with the extension and remodeling (except elevator) of the U. S. Postoffice, Court House, etc., at Elmira, N. Y. The work contemplates certain changes incident to a new elevator. Drawings and specifications may be obtained from the custodian of the building or at this office, in the discretion of the Supervising Architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close August 4, 1930.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., July 7, 1930.—SEALED BIDS will be opened in this office at 3 P. M., August 4, 1930, for the construction of the U. S. Postoffice at Peekskill, N. Y. Drawings and specifications, not exceeding six sets, may be obtained at this office, in the discretion of the Supervising Architect, by any satisfactory general contractor, and provided a deposit of \$25.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. JAS. A. WETMORE, Acting Supervising Architect.

Bids close July 29, 1930.

## Virginia Highway Work

Richmond, Va.

Tuesday, 10 A. M., office of the Va. Dept. of Highways, Richmond, Va. Rt. 10, Proj. 191, 1—48 ft. and 14—31 ft. 3 in. Steel Beam Spans Bridge, Cu. Yds. Class A Conc. 784.7, Lbs. Reinf. Steel 89,140, Struct. Steel 205,500, Lin. Ft. Piles 13,140. Rt. 19, Proj. 622, 4.8 Mi. Soil, Cu. Yds. Soil 15,484, Cu. Yds. Excav. 106,138, Lbs. Reinf. Steel 10,025. Details obtainable upon request.

Bids close July 22, 1930.

## Timber Bridge

DEPARTMENT OF PUBLIC WORKS  
STATE OF MARYLAND  
STATE ROADS COMMISSION

### NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for building bridge as follows:

Queen Anne's County, Contract No. Q-43-28—Timber bridge, exclusive of draw span, on the road from Love Point to Queenstown over Kent Island Narrows. Will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M., E. S. T., on the 22nd day of July, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 8th day of July, 1930.

G. CLINTON UHL, Chairman.  
L. H. STEUART, Secretary.

Bids close July 29, 1930.

## South Carolina Highway Work

S. C. STATE HIGHWAY DEPARTMENT  
Columbia, S. C.

Sealed bids will be publicly opened at 11 A. M. Tuesday, July 29, 1930, in the auditorium of the Jefferson Hotel, Columbia, S. C., for the construction of the following projects:

State Project 560 Reopened, Marlboro County (Road Work)—the paving with plain Portland cement concrete of 10.359 miles of Route 30 from Bennettsville via McColl to the North Carolina state line.

F. A. Project 39, A&C Contr. 2, and State Project 562, Contr. 2, Georgetown County (Road Work)—the paving with plain Portland cement concrete of 12.113 miles of Route 40 from Santee River to Sampit River.

F. A. Projects 179 Reopened and 300, Colleton-Dorchester Counties (Road Work)—the paving with plain Portland cement concrete of 8.648 miles of Route 30 from St. George to the Edisto River.

State Projects 731, Contr. 3, and 722-A&B, Abbeville-Greenwood Counties (Road Work)—the paving with plain Portland cement concrete of 13.26 miles of Route 24 from Anderson County line near Honea Path to Hodges.

F. A. Projects 291-A, Sect. 2, Contr. 2, and 291-A Ext., Contr. 2, Chesterfield County (Road Work)—the paving with plain Portland cement concrete of 11.825 miles of Route 1 from Cheraw to Patrick.

F. A. Projects 172 Reop. and Extensions, 241-B Reop. and 241-A Reop., Sect. 1, Horry County (Road Work)—the paving with plain Portland cement concrete of 13.725 miles of Route 40 from Conway to the Pee Dee River at Yauhannah.

F. A. Projects 90 Reop., Sect. 2, and 126 Reop., Contr. 2, and State Project 531 Reop., Contr. 2, Fairfield County (Road Work)—the paving with plain Portland cement concrete of 13.607 miles of Route 21 from Winnabow to the Richland County line.

F. A. Project 308, Clarendon County (Road Work)—the paving with plain Portland cement concrete of 10.23 miles of Route 4 from Manning to Summerton.

State Project 557 Reop. and Ext., Colleton County (Road Work)—the paving with plain Portland cement concrete of 11.389 miles of Route 30 from Walterboro to the Edisto River.

F. A. Projects 367 and 223 Reop., Georgetown County (Road Work)—the paving with plain Portland cement concrete of 21.42 miles of Route 40 from Georgetown to the Pee Dee River.

State Project 689-A&B, Contr. 2, Lancaster County (Road Work)—the paving with plain Portland cement concrete of 17.13 miles of Route 26 from Lancaster to the Kershaw County line.

State Project 661-B, Kershaw County (Road Work)—the paving with plain Portland cement concrete of 5.999 miles of Route 26 from Boykin's Mill toward Sumter.

F. A. Project 4 Reopened, Contr. 2, York County (Road Work)—the widening of 3 miles of Route 5 from Rock Hill toward Fort Mill.

F. A. Project 74 Reopened, Marlboro County (Road Work)—the surface treatment of 6.77 miles of Route 1 from Route 9 to the North Carolina state line.

F. A. Projects 12, 16, 86, 193 and 212, Allendale-Barnwell-Aiken Counties (Road Work)—the surface treatment of 49.62 miles of Route 28 from Allendale to the Savannah River near Augusta.

F. A. Projects 80 Reop. and Ext. and 301, Union-Newberry Counties (Road Work)—the grading of 15.76 miles of Route 176 from Union to Enoree River.

F. A. Projects 166 Reop., 168 Reop., Sect. 1, 300 and State Project 774, Bamberg-Orangeburg Counties (Road Work)—the grading and sand-claying of a section of 15.561 miles in length of Route 78 from Bamberg to Branchville.

F. A. Projects 293-B&C, Greenwood County (Road Work)—the grading of 15.418 miles of Route 10 from Salak to the McCormick County line.

State Project 590-A, Horry County (Road Work)—the grading of 17.9 miles of Route 40 from Route 38 to Green Sea.

F. A. Project 17 Reop., Calhoun County (Bridge Work)—the widening of three bridges on Route 2 between Lexington County line and St. Matthews.

State Project 574, Colleton County (Bridge Work)—the construction of a reinforced concrete, structural steel and treated timber bridge over Little Salkahatchie River on Route 64.

F. A. Project 275-B, York County

(Bridge Work)—the construction of a reinforced bridge over Fishing Creek on Route 21.

State Project 717, Saluda-Newberry Counties (Bridge Work)—the construction of a reinforced concrete and structural steel bridge over Saluda River on Route 19.

State Project 516, Saluda-Newberry Counties (Bridge Work)—the construction of a reinforced concrete and structural steel bridge on Route 392 near Chappells.

State Project 696, Lancaster County (Bridge Work)—the construction of a reinforced concrete, structural steel and treated timber bridge on Route 97 between Great Falls and Liberty Hill.

State Project 714, Chesterfield County (Bridge Work)—the construction of reinforced concrete bridges on Route 35 between Pageland and McBee.

F. A. Project 300, Orangeburg-Bamberg Counties (Bridge Work)—the construction of a reinforced concrete bridge over Edisto River on Route 78 near Branchville.

F. A. Project 268-B, McCormick County (Bridge Work)—the construction of a reinforced concrete bridge over Rock Creek on Route 43.

State Project 722, Greenwood County (Bridge Work)—the construction of a reinforced concrete bridge over Southern Railway tracks near Hodges on Route 24.

State Project 720, Chesterfield County (Bridge Work)—the construction of a reinforced concrete bridge over Thompson's Creek on Route 9 near Chesterfield.

F. A. Project 195-R, Greenwood-Laurens Counties (Bridge Work)—the construction of a reinforced concrete bridge over Saluda River on Route 25 near Ware Shoals.

F. A. Project 80 and 296, Williamsburg County (Bridge Work)—the construction of one concrete bridge on Route 26 near Kingstree and three reinforced concrete bridges on Route 26 between Kingstree and Andrews.

State Project 545 Reop., Lexington County (Road Work)—the paving with plain Portland cement concrete of 14.177 miles of Route 24 from Batesburg to a point near Fair View Cross Roads.

The State Highway Department will furnish cement on all concrete paving projects and bridge projects at \$2.52 per barrel, delivered at nearest railroad point, subject to the usual return sack privileges, but will not furnish cement on any of the grading or surface treatment projects listed above.

The State Highway Department reserves the right to reject any or all proposals and waive any technicalities.

BEN M. SAWYER,  
Chief Highway Commissioner.

Bids close July 29, 1930.

## Bascule Span

DEPARTMENT OF PUBLIC WORKS  
STATE OF MARYLAND  
STATE ROADS COMMISSION

### NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for a single leaf bascule span superstructure as follows:

Queen Anne's County, Contract No. Q-63-28

—A single leaf bascule span superstructure, overhead counterweight type, clear channel of 50 ft. 0 in., with a 20 ft. 0 in. clear roadway, at Kent Island Narrows on the road from Queenstown to Love Point, in Queen Anne's County. Plans to be prepared by Bidder.

Will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M., E. S. T., on the 29th day of July, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 3rd day of July, 1930.

G. CLINTON UHL, Chairman.  
L. H. STEUART, Secretary.

Bids close July 22, 1930.

## Maryland Highway Work

DEPARTMENT OF PUBLIC WORKS  
STATE OF MARYLAND  
STATE ROADS COMMISSION

### NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for building five sections of State Highway as follows:

Anne Arundel County, Contract No. AA-94-

711—One section of State Highway along the Crain Highway from Glenburnie toward Benfield, a distance of 3.31 miles (concrete shoulders).

Baltimore City, Contract No. BC-93-72—One section of State Highway along Walther Avenue, from Harford Road to Weaver Avenue, and from Grindon Avenue to Southern Avenue, a distance of 0.57 mile (sheet asphalt).

Prince George's County, Contract No. P-128-311—One section of State Highway along the Baltimore-Washington Boulevard through Laurel, a distance of 0.7 mile (concrete sidewalks).

Prince George's County, Contract No. P-121-311—One section of State Highway along the Defense Highway from Bladensburg to the Crain Highway, and along the Crain Highway from Pigeon Inn to the Defense Highway, a distance of 15.1 miles (concrete shoulders).

St. Mary's County, Contract No. SM-69-84—One section of State Highway from the end of Contract No. SM-45, south of Newmarket toward Budd's Creek, a distance of 2.0 miles (gravel).

Will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M., E. S. T., on the 22nd day of July, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 8th day of July, 1930.

G. CLINTON UHL, Chairman.  
L. H. STEUART, Secretary.

Bids close August 8, 1930.

## Light and Power and Telephone Franchises

Martinsville, Va.

Bids will be received by the City of Martinsville, Va., on August 8 at 4 o'clock P. M. for franchise for a Light and Power system and Telephone system, including the purchase of the present municipal systems and property. Three per cent deposit required with bid. A copy of the advertisement for bids, including proposed franchise ordinances in full, with condensed statement of earnings and other data, will be furnished on request.

A. S. GRAVELY,  
Clerk of City Council.

Bids close July 31, 1930.

## Water Tank

Johnson City, Tenn.

Sealed bids will be received by the Board of Commissioners of the City of Johnson City, Tennessee, until Thursday, July 31, 1930, at 2 P. M. for the construction and installation of a water tank of one million gallons capacity. Bids will be received on both steel and reinforced concrete tanks.

Plans and specifications may be obtained from John C. Laher, Commissioner of Public Utilities, Johnson City, Tennessee.

The right is reserved to reject any or all bids.

This July 8th, 1930.  
J. ALLAN ARTZ,  
Recorder.



# CLASSIFIED OPPORTUNITIES

## MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES

**FLORIDA GULF COAST**, thousands of acres; timber, railroads, also two best large industrial sites in Jacksonville. Railroads and water. **HERBERT McINTIRE**, Owner, Gainesville, Fla.

### IRON ORE AND MANGANESE FOR SALE.

A Brown Iron Ore and Manganese property in Murray County, Georgia, near Tenn. Line. **F. A. POWELL**, Ft. Myers, Florida.

### COAL LANDS AND MINES

**50,000 ACRES COAL LANDS**, \$5.00 per acre. East Tennessee. On railroad; good markets North and South, with favorable freight rates. Excellent steam, domestic, by-product coals, 3 to 10 ft. seams. Producing mines on property withheld from sales. Excellent opportunity for safe, long time investment, operating or leasing. Address No. 5090, care Manufacturers Record.

### TIMBER AND TIMBER LAND

**WE HAVE** exclusive sales privilege for more than 500,000 acres of Florida land at sacrifice prices. Also large areas in Georgia and South Carolina. Desirable second growth pine lands; agricultural lands adapted to tung oil and citrus crops, grazing lands, etc. To share in the assured future of Florida and the South **INVESTIGATE NOW**. **THE JAMES D. LACEY COMPANY**, 1409 Barnett Bldg., Jacksonville, Fla.

## FARM, FRUIT AND TRUCK LANDS

**FLORIDA**  
**FLORIDA ORANGE GROVE**: 40 acres of land, 20 acres in bearing orange trees in excellent condition; 1/4 mile frontage on beautiful clear water lake and 1/4 mile frontage on public road. This is an exceptional buy at \$15,000.00.

**JOHN WEHR**, Realtor, Clermont, Florida.

### LOUISIANA

**ST. CHARLES PARISH, LOUISIANA**, offers opportunities in cattle ranches, agricultural and industrial sites. **St. Charles Bank & Trust Co.**, Sellers, La.

### NORTH CAROLINA

**FOR SALE OR TRADE**—\$35.00 per acre. 5000 acres on Atlanta-Washington Highway, near Pinehurst, N. C.; 400 acres in peaches, good crop now on orchard; 700 acres cleared; \$20,000 home, 16 tenant houses, 2 large cattle barns, \$30,000 equipment. Will take part merchandise or real estate; terms to suit; a real bargain. Must be handled quick. Write or wire for particulars. **G. C. Shelton**, Salisbury Rd., Winston-Salem, N. C.

### VIRGINIA

**SOUTH ISLES PLANTATION**  
830 acres, 450 acres farming and pasture land, about 300 acres fertile river bottoms, balance woodland and timber. Large, attractive mansion in grove of several acres handsome box wood, shrubbery, flowers and many varieties of trees. Excellent stock barn, tenant house, hog sheds and other outbuildings. Near Lynchburg in good community. Price \$44,000. Full details and illustrated catalogue of other attractive places upon request.  
**GEO. V. VENABLE & CO.**, Lynchburg, Va.

## ISLAND FOR SALE

**4000-ACRE** Sea Coast Island, 1000 cleared, ready immediate cultivation. Cottage and tenant houses, artesian wells, beautiful trees and groves, deer, quail, duck pond. Suitable for commercial planting, club or private game preserve and estate.  
**J. W. Barnes**, Mendel Bldg., Savannah, Ga.

## SOUTHERN HOMES

**OVER 500 ACRES**, spring, brook, log cabin, many long leaf pines. Estate preserve. Fine fish pond "full of fish." Low acreage price. **G. F. ARCHER**, Aiken, S. C.

## SOUTHERN HOMES

**SOUTHERN HOMES**  
In the best city in the Carolinas. \$10,000 to \$75,000, according to size and location.  
**F. C. ABBOTT & CO.**, Charlotte, N. C.  
32 years in Charlotte Real Estate.

## SOUTHERN ESTATE

**FLORIDA BARGAIN!**  
Now is the time to buy in Florida.  
A beautiful estate, with 20 years' growth of beautiful palms and shrubs, with residence and cottage, located just across street from Edison and Ford's residence; contains about four acres; must be sold to settle estate.  
**P. JOHN HART REALTY CORP.**, P. O. Arcade, Fort Myers, Fla.

## BUSINESS OPPORTUNITIES

**LONG TERM LOANS**, large amounts, made on industrial, mercantile, sawmill properties. **THOS. W. GILMER**, Attorney, Bay Minette, Alabama.

**RICH GOLD PLACER**. Wants capitalist to finance to work.  
**W. A. OWENBY**, Mineral Bluff, Ga.

**WANTED CONNECTIONS** with modern plant, with sales organization, with whom can make special arrangements for manufacturing doors and trim. **Ambarwood Mfg. Co.**, Helena, Ark.

**COUNTRY STORE**, largest in United States, general merchandise stock of \$100,000, wholesales and retails, for 60 miles. Would sell to capable man with some capital; 85 miles southwest of St. Louis.  
**Chas. L. Delbridge**, Delbridge, Mo.

**MANUFACTURERS**—Write for our **FREE** Classification Sheets of inventions for sale, covering 135 main subjects, and in one or more of which you will doubtless be interested. **ADAM FISHER MFG. CO.**, 578 Enright, St. Louis, Mo.

**WANTED**—Reputable firm or person to exploit on national scale an invention. It is an improved and proven **AMMONIA PRE-COOLER** and **ACCUMULATOR** (patent applied for), which will increase, by 15% up, efficiency of dairy, ice cream, fruit precooling and ice plants. Will pool entire interest as sole owner and experimental equipment valued at \$1500 or will accept \$4250 for everything. Mean business and this is someone's big opportunity. Prints and descriptive matter mailed.  
**H. C. FRIERSON**, No. 508 First St. N., Winter Haven, Fla.

## FINANCIAL

**MONEY WANTED**  
6, 7 and 8% Mortgage Loans on City, Town or Country property. **Southern Land & Investment Co.**, Baton Rouge, Louisiana.

## INDUSTRIAL SURVEYS

**ENGINEERING REPORTS** on resources of cities and towns. Recommendations for industrial development and zoning made by specialists in locating industries.  
**TECHNICAL SERVICE CO.**, Woolworth Building, New York City

## DEVELOPING AND ENGINEERING

**ORGANIZING—DEVELOPING—ENGINEERING**  
Engineering firm, widely experienced in investigating, organizing, developing, designing and supervising construction, solicit correspondence regarding development or extension of meritorious projects and existing industries, power plants and utilities. Address No. 8016, care Manufacturers Record.

## INDUSTRIAL PLANTS

**FOR SALE**—Manufacturing Plant of going concern. Need money for operating purposes. Will sign ten years' guaranteed lease at attractive rental. For full particulars address No. 8092, care of Manufacturers Record, Baltimore, Md.

**COMPLETE WOODWORKING PLANT**, suitable for furniture or other wood articles. Dry kiln, side track, with ample trained labor available. Can be bought for less than one-half reproduction value. **First Securities Company**, Chattanooga, Tenn.

## FACTORY SITES

### PLANT SITE AND VILLAGE IN GEORGIA

Very desirable plant site on main line Central of Georgia Railroad, 25 miles from Macon, Georgia. Good location for hosiery, overalls, spinning, etc.; also wood working, furniture and stoves. Power plant available, with deep well and pumps, 100-foot tower and tank, sprinkler system and service lines installed. Fifty good houses, club house and store. In town of 1500 population. Plenty of labor available.

**NASHVILLE INDUSTRIAL CORPORATION**, Old Hickory, Tennessee.

## FACTORY BUILDINGS

**ONE MODERN** fireproof daylight manufacturing plant, steel and tile construction, size 100x440 feet, sixteen acres of land, 50,000-gallon concrete tank and tower, on Missouri Pacific Railroad; suitable for the manufacture of airplanes, metal and construction work, planing mill, oil well supplies, etc. Located one mile from city limits; low taxes and insurance. Attractive price; liberal terms.

**ETHERIDGE BROTHERS COMPANY**, 230 Broadway, San Antonio, Texas.

## PATENT ATTORNEYS

**PATENTS**—Booklet free. Highest references. Best results. Promptness assured. **WATSON E. COLEMAN**, Patent Lawyer, 724 Ninth St., N. W., Washington, D. C.

**FREE "PATENT PARTICULARS"**  
**Sterling Buck**, over 23 years Registered Patent Attorney. Prompt and thorough services. Suite M 629 F, Washington, D. C.

**SEYMOUR & BRIGHT**, Registered Patent Attorneys. Established 1876. **PATENTS, TRADEMARKS, COPYRIGHTS**. Prompt and thorough service. Suite 600-4, Barrister Building, Washington, D. C.

**PATENTS—TRADEMARKS—COPYRIGHTS**  
Charlotte office convenient to South. **PAUL B. EATON**, Registered Patent Attorney, 218 Johnson Building, Charlotte, N. C., and 314 McLachlen Building, Washington, D. C.

**EDWARD C. SASNETT**, Atty. at Law, formerly a Principal Examiner in the U. S. Patent Office. I offer to inventors and manufacturers a strictly personal service based on twenty years' experience in patent work. **McGill Building**, Washington, D. C.

## AGENCIES WANTED

**SALES REPRESENTATIVE**—Large and valuable acquaintance with foundries, stove manufacturers, coal mines and supply houses in entire South wishes immediate connection; salary or commission. Highest references. Address **W. J. BACH**, 1139 So. 14th Street, Birmingham, Ala.

**OUR SALESMEN** travel Va., North and South Carolina, Ga. calling on the building trade supply houses. We would like to add two or three good lines as manufacturers' agents. If you are not properly represented in the South, write us. Any good line considered. **Southern Sales & Service Co.**, Pinehurst, N. C.

## REPRESENTATIVES WANTED

DEALERS WANTED to represent established incinerator company. Exclusive rights given in territories allotted. Address Economy Incinerator Co., Inc., Milwaukee, Wis.

IF YOU HAVE a following among steam boiler operators and are not afraid to work you can make good money by selling our Boiler Compounds on commission basis. We make water analysis and guarantee results on our Water and Metal Treatments. Write for particulars. SOUTHERN PRODUCTS CORPORATION, New Orleans, La.

## EXCLUSIVE AGENCY

CONTRACTOR, Engineer or Lumber Company can build up attractive business by selling and erecting our nationally known line of roof structures. We wish to make connections in the Southern States, Kansas, Michigan, Wisconsin and the Dakotas. Address No. 9030, care Manufacturers Record.

## SITUATIONS WANTED

SUPERINTENDENT—Employed, wants more difficult job; experienced in very heavy grading and all types paving; erection and operation large crushing plants, dragline excavators, etc. Good record on speed and costs. Fine following; no booze. Address No. 9036, care Manufacturers Record.

## MEN WANTED

MULTI-WALL BAG SALESMAN, southeastern territory. Building supply or milling trade connections essential. Address No. 9037, care of Manufacturers Record.

## WANTED.

An experienced shale brick grader for smooth and rough texture face brick; give experience and references. PLAINVILLE BRICK CO., INC., Plainville, Ga.

REFRACTORIES SALESMAN for Texas by recognized Missouri producer having one of most complete lines available. Requires Texas residence. Splendid opportunity. Have your reply complete as to experience, references, etc. Address No. 9033, care Manufacturers Record, Baltimore.

IF YOU ARE OPEN to overtures for new connection and qualified for a salary between \$2500 and \$25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service, of recognized standards and reputation, through which preliminaries are negotiated confidentially for positions of the caliber indicated. The procedure is individualized to each client's personal requirements, your identity covered and present position protected. Established twenty years. Send only name and address for details.

R. W. BIXBY, INC.,  
103 Downtown Bldg. Buffalo, New York

## MEN WANTED

WANTED—Salesman experienced in selling lumber or creosoted wood products. Address No. 9032, care of Manufacturers Record, Baltimore, Md.

## MACHINERY AND SUPPLIES

FOR SALE AT A BARGAIN—25 Horsepower Fairbanks-Morse single cylinder (Horizontal) Y-type, style H, 325 R.P.M. engine, with 22-in. direct drive friction clutch. Guaranteed 98% new. Gibbs Machine Co., Orlando, Fla.

COMPLETE COTTON GIN outfit in good running order; 4—70 Pratt gins and cleaner feeders, automatic press, seed scales, shafting, pulleys, belts, 40 H.P. engine.

JOSEPH COURAND,  
San Jacinto Building, San Antonio, Tex.

## VALDURA PAINT

CLOSING OUT STOCK. Dealer will sacrifice for quick sale all or part 600 gallons Valdura Paint. First-class condition. Opportunity for great saving to dealers or users. Subject to prior sale. Address No. 9023, care of Manufacturers Record.

FOR SALE—Air hoist, 2-ton Curtis, also Granite air compressor 6 in. by 6 in. and a twin cylinder Gardner 6 in. by 6 in. compressor with a short belt hook-up to a 15-hp. GE motor, AC 60 cycles, 110-220 volts. All the above, in good working condition. for sale cheap.

BRUCE'S MARBLE AND GRANITE WKS.,  
Ft. Scott, Kan.



## SPECIAL ADVERTISEMENTS OF GENERAL INTEREST



### Notice of Trustee's Sale In Bankruptcy

Pursuant to an Order of his Honor, Judge J. Lyles Glenn, United States District Judge, I will sell to the highest bidder for cash at the Mill at Blacksburg, South Carolina, on August 5th, 1930, at 3 P. M., all the real and personal property located at the mill of the Blacksburg Spinning Mills, Bankrupt. The main building is of standard mill construction, two stories high, 100 ft. by 160 ft. This building is situated on a tract of land of fifty and one-half (50½) acres, and there are also twenty-eight (28) tenant houses, one (1) ware house, nine (9) garages, and one (1) barn. All the buildings are in good condition. Machinery consists of twenty (20) Saco-Lowell Spinning frames of 240 spindles each and twenty-five (25) 40" Whittin Cards, and all complementary machinery to equip a mill to manufacture from 12 to 30's hosiery yarns. The Mill building and ware house is equipped with sprinklers throughout. At present, only the first floor is occupied with machinery, the second floor measures 100 ft. by 160 ft., is vacant, and would easily accommodate 5000 spindles with complementary machinery.

Inspection of the mill is invited and a competent person will be on the ground at all times to show any prospective bidder over the property. This mill is nicely situated on the main line of the Southern railroad with all necessary side tracks and conveniences, and also, is located on the proposed line of the Piedmont and Northern Railroad. Power is supplied by Duke Power Company, all wiring and transformer houses being in place. A complete list and description of all tenant houses and machinery is on file in the office of the Trustee at York, S. C., and may be checked by any bidder.

The successful bidder must immediately deposit with the Trustee, a certified check or cash in the sum of \$5,000.00 as evidence of good faith, and on failure to immediately make this deposit, the property will be resold at the bidder's risk at the same place and time. Should the bidder fail to comply with his bid within ten days after sale, this sum of \$5,000.00 will be deemed liquidated damages. No bid of less than \$50,000.00 will be considered.

CARL H. HART, Trustee

**Blacksburg Spinning Mills, York, S. C.**

### Notice of Trustee's Sale In Bankruptcy

Pursuant to an Order of his Honor, Judge J. Lyles Glenn, United States District Judge, I will sell to the highest bidder for cash at the Mill at Bowling Green, South Carolina, on August 5th, at 11 A. M., all the real and personal property located at the mill of the Bowling Green Spinning Mills, Bankrupt. The main building is of standard mill construction, 284 ft. by 60 ft. This building is situated on a tract of land of thirty-three and ninety-three one hundredths (33 93/100) acres, and there are also twenty-nine (29) tenant houses, two (2) ware houses, one (1) barber shop, six (6) garages, one (1) store, and one (1) schoolhouse. All the buildings are in good condition. Machinery consists of twenty (20) Saco-Lowell Spinning frames of 252 spindles each and ten (10) 40" Whittin Cards, and ten (10) Saco-Lowell Pettie 40" Cards, and all complementary machinery to equip a mill to manufacture from 22's to 30's hosiery yarns. The Mill buildings and ware house is equipped with sprinklers throughout.

Inspection of the mill is invited and a competent person will be on the ground at all times to show any prospective bidder over the property. This mill is situated on the line of the Carolina and North Western railroad (nine miles South of Gastonia, North Carolina) with all necessary side tracks and conveniences. Power is supplied by Duke Power Company, all wiring and transformer houses being in place. A complete list and description of all tenant houses and machinery is on file in the office of the Trustee at York, S. C., and may be checked by any bidder.

The successful bidder must immediately deposit with the Trustee, a certified check or cash in the sum of \$5,000.00 as evidence of good faith, and on failure to immediately make this deposit, the property will be resold at the bidder's risk at the same place and time. Should the bidder fail to comply with his bid within ten days after sale, this sum of \$5,000.00 will be deemed liquidated damages. No bid of less than \$50,000.00 will be considered.

CARL H. HART, Trustee

**Bowling Green Spinning Mills, York, S. C.**

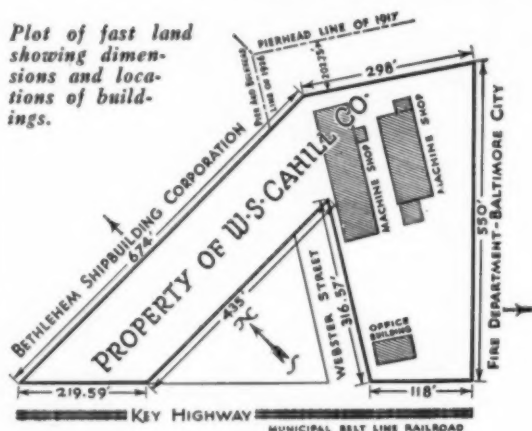


## FOR SALE *Complete Water Front Property* As an Entirety



*Including all Real Estate, Buildings and Equipment*

Plot of fast land showing dimensions and locations of buildings.



Fee simple water front property, situated in the harbor of Baltimore City. Five minutes' ride to center of city. Municipal Belt Line Railroad in front of property on Key Highway. Approximately  $4\frac{1}{2}$  acres of fast land and 2 acres riparian rights.

Property of Bethlehem Shipbuilding Corporation adjoining on the North. Property of Fire Department, Mayor and City Council of Baltimore City, adjoining on the Southeast.

*For further information, address*

**W. S. CAHILL COMPANY**

Key Highway & Webster St.

BALTIMORE, MD.

### RECEIVERS' SALE OF FURNITURE FACTORY

The factory, stock in process, finished furniture, lumber, supplies and all other property of the Stoneville Cabinet Company, except the accounts receivable will be sold to the highest bidder, for cash, on

**Saturday, July 26, 1930, at 2 p. m.**

at the office of the Stoneville Cabinet Company in the Town of Stoneville, N. C.

This factory is a modern well equipped plant with some thirty acres of land to be sold with same, and there is located on this property nine tenant houses, also numerous other buildings. The property is situated on the Norfolk & Western Railway and the hard surface highway leading from Roanoke, Va., to Winston-Salem, N. C.

The inventory of the stock in process, finished furniture, lumber, and other supplies amounts to \$27,326.99, which inventory was taken at very low prices.

The factory and inventory will be sold together.

For information write,

J. HAMPTON PRICE, Leaksville, N. C.  
C. G. MILLER, Stoneville, N. C.  
Receivers of the Stoneville Cabinet Co.

### OPPORTUNITY

Have you a used engine, air compressor, rails or equipment of any kind you are not using? Here is your opportunity to turn them into cash. Use our Resale Department for good results.

*Manufacturers Record*  
Baltimore, Md.



## RESALE DEPARTMENT

MACHINERY

EQUIPMENT

SUPPLIES



#### STEAM DRYER BARGAINS

10—Bartlett & Snow Steam Jacketed Agitated Reducing Kettles or Steam Dryers, 10' dia. x 3' deep. In excellent condition.

Address A-471

Care of Manufacturers Record, Baltimore, Md.

#### FOR SALE

7—50 Gallon Cast Iron Steam Jacketed Dopp Kettles, depth 22-3/8," diameter top 30," bottom discharge. Complete with covers, legs and mechanical agitator. A-1 shape; will sell very reasonable.

Address A-499

Care of Manufacturers Record, Baltimore, Md.

#### RECONDITIONED USED PIPE

Also

*Structural Steel*

Prompt delivery from Stock

Maryland Pipe & Steel Corp.  
Ostend & Scott Sts., Baltimore, Md.

# FOR SALE

One Ingersoll-Rand (Leyner) No. 33 Drill Sharpener, complete with dollies, dies and other accessories. Price, \$400.

One Ingersoll-Rand No. X-70 Drifter, for 1 1/4" round

steel, wet or dry work. Price, \$175.

Two Ingersoll-Rand No. B C R - 430 Jackhammers with shank for 7/8" hex low steel, for dry work. Price, \$50 each.

*Above prices are f.o.b. El Paso, Texas. This equipment is in good condition.*

**A. COURCHESNE, INC.**

Box 200

El Paso, Texas

## FOR SALE NEW UNUSED SPUR GEARS

1-C.I.-68-T: 2 1/4" C.P.: 7 1/4" F: 6-15/16" B.  
1-C.S.-14-T: 3" C.P.: 12" F: 7" B.  
1-C.I.-Shrouded-13 T: 3" C.P.: 9 1/4" F (inside) x 11" F (outside).  
1-C.S.-Cut-16 T: 1 1/4" C.P.: 6 1/4" F: 3-15/16" B.  
1-C.I.-140 T: 1 1/4" C.P.: 6 1/4" F: 6-15/16" B.  
1-C.I.-Split-120 T: 3" C.P.: 12" F: 10-15/16" B.  
1-C.I.-Split-88T: 3" C.P.: 8" F: 8-15/16" B.  
1-C.I.-15 T: 2" C.P.: 7" F: 3-15/16" B.

**THE STANDARD LIME & STONE CO.**  
524 Equitable Bldg. Baltimore, Md.

**SATISFACTION**

**ALBERT PIPE SUPPLY CO., INC.**

**NEW-RECLAIMED-USED**

**PIPE**

**ALL SIZES CUT TO SKETCH AND STOCKED**

**BERRY & NORTH 13<sup>th</sup> STS. BROOKLYN, N.Y.**

**GUARANTEED**

**SERVICE** **PRICES**

## IDLE MACHINERY

Can be  
Disposed of  
by  
Advertising  
it in the

**Manufacturers Record**  
Baltimore, Md.

## PIPE

Rethreaded, reconditioned, guaranteed, suitable for all practical purposes, furnished with new threads and couplings, 400,000 feet in all sizes from 24" to 1/2".

Also large stock of spiral pipe, sizes 7", 10", 12", 14", 20" and 24".

Large stock of valves and fittings, screwed and flanged. Can make attractive prices.

**MARINE METAL & SUPPLY CO.**  
167 South St., New York City

## PIPE NEW SECOND HAND

Overhauled and Tested  
New Threads and Couplings  
Established 1904

**Albert & Davidson  
Pipe Corp.**

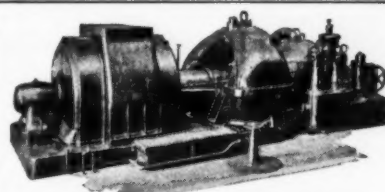
Second Ave., 50th-51st St., Brooklyn, N.Y.  
Telephone Sunset 1900

## 8" Galvanized Corrugated Pipe

6000 ft. 8" NEW GALVANIZED CORRUGATED pipe in lengths 16 to 20 ft. suitable for exhaust drains, water systems, sewers, etc. Have the necessary connecting sleeves. Price considerably under the market.

2000 ft. 12" Naylor black asphalted spiral welded slip joint pipe, slightly used.

**MARINE METAL & SUPPLY CO.**  
167 South Street New York City



10,000 KVA Turbo typical of 4 units recently delivered and similar to the following.

**PRACTICALLY NEW 100% INTERNAL EXCELLENCE WESTINGHOUSE CONDENSING TURBO UNITS COMPLETE—INSTANT SHIPMENT**

1-15,000 KW CW-218 Frame—1800 RPM  
1-10,000 KVA CW-118 Frame—1800 RPM  
1-7,500 KW CW-78 Frame—1800 RPM  
1-5,500 KVA CW-76 Frame—3600 RPM  
1-4,000 KVA CW-76 Frame—3600 RPM  
2-1,700 KVA CW-28 Frame—3600 RPM  
1-1,500 KVA CW-16 Frame—3600 RPM  
(3 phase, 60 cycle, standard voltages)

**A.S.M.E. CODE DESIGN BOILERS 200-225 lbs.**

2-1500 H.P. Cross Drum B & W  
2-2650 HP Ladd Bent Tube  
5-627 HP Stirling Plant, modern stokers, auxiliaries

8-504 HP B & W Vertical Steel headers, et al.  
**CONDENSERS MOTOR GENERATOR SETS**

Verification and proof of new equivalent condition easily reached on personal inspection  
50% to 200% saving on investment

Send us list of your requirements—or what you have for sale

**COME TO CINCINNATI**



## Low Cost Long Life

## UNEXCELLED SERVICE

Three strong factors that have kept Gregory HI-GRADE-REBUILT MOTORS and Electrical Machinery in the lead since 1893.

Before buying consult Gregory's 80-page illustrated Monthly Bargain Sheet. It will save you Money, Time and Worry. Thousands of buyers have proved to their own satisfaction and profit that it pays to buy

**GREGORY HI-GRADE-REBUILT Electrical Machinery**

Writes, phone or wire



**Gregory  
Electric  
Company**

1801 S. Lincoln St., Chicago

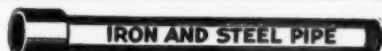
## RANDLE

### OFFERS BIG BARGAINS IN

Used and Rebuilt Engine Generator Sets, Turbo Generator Sets, Motors, Rotary Converters, Generators, Motor Generator Sets, Engines, Boilers, Steam and Electric Machinery of all kinds, also Machine Tools. Send for our new machinery list. Yours for the asking. Established 50 years

**The RANDLE  
MACHINERY CO.**

1734 Powers St., Cincinnati, Ohio



**IRON AND STEEL PIPE**

Large quantity new and used Government material in excellent condition, ready for immediate shipment. Low prices.

**CENTRAL PIPE & SUPPLY CO.**  
Box 1099 Charleston, W. Va.

Second Hand and New Wrought Iron **PIPE** Overhauled Rethreaded and Coupled

*Also Cut to Sketch*

**Greenpoint Iron & Pipe Co., Inc.**

187-197 Maspeth Ave. Brooklyn, N. Y.

## NEW PIPE USED

Our Prices  
Will Startle You

**ZELNICKER IN ST. LOUIS**

Rails, Equipment, Machinery, Oil Engines, Tanks, Steel Sheet Piling, etc.



**BOLT MACHINES**

1 3/4" Acme Triple Head.  
No. 736 Greenfield, capacity 1/2 to 2".

**DRILLS**

Four Spindle Allen Ball Bearing.  
Three Spindle Henry & Wright Ball Bearing.  
Three Spindle, 20" Barnes, Gang.  
Two Spindle, 20" Barnes, Gang.  
Two Spindle, No. 217 Foote-Burt.  
42" Cincinnati-Bickford Radial, Gear Box, M.D.  
48" Western Radial, Gear Box.  
60" Dreses Radial, Gear Box.

**LATHES**

21"x11" LeBlond Heavy Duty, Geared Head, single pulley drive.  
20"x10" Monarch Geared Head, Motor Driven, with motor.

**PIPE MACHINES**

4" No. 304-A Oster, belt driven.  
4" Eaton-Cole & Burnham, belt driven.  
8" Eaton-Cole & Burnham, belt driven.

**PUNCH AND SHEAR**

No. 16 Pels Combined Punch, Slitting Shear, Bar, Angle and Tee Cutter.  
Punches 1-1/16" dia. through 5/8" material.  
Shears 1-1/2" round, 1-5/16" square.

**SAWS**

2—Racine 6"x6" Hi-Speed.  
1—No. 5 Robertson 8"x15".

**AIR COMPRESSORS**

1050 cu. ft. Worthington 18"x11"x14" Duplex, Two Stage.  
528 cu. ft. Ingersoll Rand, Class ER-1, 14"x12".  
500 cu. ft. Ingersoll Rand, Class XRB, 13" and 8"x12", Duplex, Two Stage.  
265 cu. ft. Worthington 9 1/2"x12".  
188 cu. ft. Pennsylvania, Class 3-A, 9"x8".  
148 cu. ft. Pennsylvania, Class 3-A, 8"x8".

**DELTA EQUIPMENT COMPANY**

148 N. Third Street, Philadelphia, Pa.

**USED DIESEL ENGINES**

- 40 HP Fairbanks, Morse with belted 30 KVA 1200 RPM 3 phase, 60 cycle, 2300 volt alternator-exciter-switch-board.  
60 HP Bessemer for belt drive.  
180 HP Fairbanks, Morse for belt drive-Friction clutch pulley—complete equipment—can be arranged to drive generator.  
240 HP Fairbanks, Morse, can be arranged for belt drive or direct connected generator drive.  
10 HP Fairbanks, Morse semi-Diesel horizontal—complete equipment.

*The above engines were traded in for larger equipment  
All the above reasonably priced*

**FAIRBANKS, MORSE & CO.**

115 E. Lombard Street,  
BALTIMORE, MD.

**BOILERS**

- 2—500 H. P. Heine Water Tube, 160 lbs. Pressure, A. S. M. E. code.  
2—180 H. P. Keeler Water Tube, 200 lbs. Pressure, A. S. M. E. code.  
1—150 H. P. 72" x 18" Hor. Ret. Tubular, 150 lb. pressure, A. S. M. E. code.

**GENERATOR SETS**

- 2—50 KVA 220 volt, 3 phase, 60 cycle Ridgway Generators, direct connected to Ridgway Engines.

**METAL WORKING TOOLS**

- 25" x 12" LeBlond heavy duty, belt drive quick change.  
20" x 21" Lodge & Shipley lathe, belt drive quick change gear.  
19" x 8" Sidney heavy duty, belt drive, quick change gear.  
No. 1 Kempsmith Universal miller, single pulley drive, table 35 1/2"x8 1/2".  
No. 4 Millis & Jones single end punch belt drive, 36" throat, cap. 1 3/4" x 1".  
No. 3 Southwark single end punch, 24" throat arch jaw, motor drive, cap. 3/4" x 3/4".  
No. 1 Gray sheet metal cutter, belt drive, 34" throat cap. 3/16" material.  
1 1/2" Landis belt cutter belt drive.  
2" Acme belt cutter belt drive.

**THE O'BRIEN MACHINERY CO.**

113 North Third Street

Philadelphia, Pa.

**5000 TRANSFORMERS**

Ready To Ship — All A. I. E. E. Standard

GUARANTEED BARGAINS



*The* **ELECTRIC SERVICE CO. Inc.**  
America's Used Transformer Clearing House  
212 Walnut Street  
Cincinnati, Ohio



We buy modern type transformers—any size—any quantity.  
Wanted especially—high voltage large capacity transformers in carload shipment.

**RAILROAD AND CONTRACTORS' EQUIPMENT****RAILROAD and CONTRACTORS EQUIPMENT**

- 40 Standard and 36" Gauge Modern Direct-connected Locomotives, in all types and weights from 3 to 75 tons.  
10 Standard and 36" Gauge Geared Locomotives, all weights.  
15 Steam Shovels and Locomotive Cranes of different types and sizes.  
3000 Tons Relaying Rails, all sizes, on our Birmingham yards.  
100 Sets 35 and 40-lb. Frogs and Switches; good as new.  
Tie plates, track spikes and track bolts, immediate shipment from Birmingham stock.

Your inquiries will receive careful and prompt attention  
**BIRMINGHAM RAIL & LOCOMOTIVE CO., Birmingham, Ala.**

**RELAYING RAIL**

- |                 |                 |
|-----------------|-----------------|
| 5 Miles 30-lb.  | 20 Miles 70-lb. |
| 10 Miles 40-lb. | 5 Miles 75-lb.  |
| 5 Miles 50-lb.  | 10 Miles 80-lb. |
| 10 Miles 60-lb. | 3 Miles 90-lb.  |

Also other sections for southern delivery

**WELLER & COMPANY**  
NEW AND RELAYING RAIL  
BIRMINGHAM ALABAMA



## RAILROAD AND CONTRACTORS' EQUIPMENT



### Trench Excavator

1-24"-30" x 12'0" Type C Model 200  
Trench Excavator with 4 cylinders  
6 3/4 x 7 Hercules Motor—Used four  
months—Excellent condition.

**ASHEVILLE PAVING CO.**  
Asheville, N. C.

### RELAYING RAILS — SWITCHES

#### TRACK MATERIAL

**THE PERRY BUXTON DOANE CO.**  
Pennsylvania Bldg. Philadelphia, Pa.

### NEW AIR TOOLS AT 1/2 PRICE

13 size B. "Thor" air motor metal drills  
(cap'y. up to 2")  
48 size C "Thor" air motor metal drills  
20 size 42 "Thor" air motor metal drills  
9 size — "Thor" air motor metal drills  
(Cap'y. up to 9/16")  
11 size BW "Thor" air motor metal drills  
(Cap'y. up to 2")  
15 size 8 "Thor" air motor close corner  
metal drills.  
14 4X "Little Giant" air motor metal drills.  
12 2X "Little Giant" air motor metal drills.  
50 No. 60 "Keller Master" riveting hammers,  
also several other makes and sizes.

These are absolutely brand new tools as  
which we will save you 50%.

**W. M. SMITH & COMPANY**  
Box 1709 Birmingham, Ala.

### FOR SALE OR RENT

2-Keystone Graders, Model No. 4.  
1-10 ton Monarch 3 wheel Steam Roller.  
1-8 ton Buffalo Tandem Steam Roller.  
2-10 ton Buffalo Springfield Steam Rollers.  
Large stock Rock Crushers, Screens and  
Elevators.

**JOHNSON & HOEHLER**  
Fernwood, Del. Co. Pennsylvania

Three miles 20 lb. Portable Track, one 7  
ton Whitcomb Locomotive and Batch Box  
Cars, all 24-in. gauge. Very attractive  
prices quoted to move quickly.

**M. K. FRANK**

1204 Clark Bldg., 220 East 42nd St.  
Pittsburgh, Pa. New York City

## MONEY IN THE BANK

Unused and unneeded Machinery  
and Supplies can be turned into  
Money in the Bank by advertising.

Use the  
**Resale Department**  
of the  
**Manufacturers Record**  
Rates on Request

## Rebuilt and Reconditioned Excavators

For Sale, or Lease With  
Option to Buy

**Marion No. 32** 1 Yard Steam  
Shovel on full crawlers. Ready for im-  
mediate delivery. An exceptional bargain,  
located at Pittsburgh.

**P&H Model 204**, 3/4 yard Clam-  
shell, 35 foot boom. Has been very care-  
fully reconditioned. At Hoboken plant.

**Thew** 1 yard Steam Shovel, on wheels  
with 20 foot boom. Must move quick, no  
reasonable offer refused. At New York.

**P&H Model 400** Dragline, 3/4 yard,  
in good shape, ready to go. Located at  
Memphis.

**Erie Gas-Air** 1 yard Clamshell Crane.  
Looks and operates like new. At Chicago.

**P&H Model 206** 3/4 yard Shovel.  
Thoroughly overhauled and in very good  
operating condition. At Hoboken plant.



Liberal Terms

Write or wire at our expense  
if you do not see what you want

**EXCAVATING**  
EXCLUSIVELY  
**EQUIPMENT**  
EXCAVATING  
**DEALERS, INC.**  
EQUIPMENT

Hoboken, N. J. Berkeley, Cal.  
1706 Willow Ave. 2857 Ninth St.  
West Allis, Wis.  
5905 Greenfield Ave.  
Los Angeles Chicago, Ill.  
2248 E. 37th St. 1040 W. Division St.

### SHOVELS

1/2-3/4-1-1 1/4 and  
1 1/2 yd. capacity

### CRANES

6-10-12-15-17 and  
20 ton capacity

## NORTHWESTS

**FACTORY REBUILT with NEW MACHINE GUARANTEE**

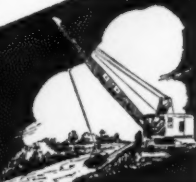
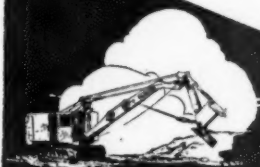
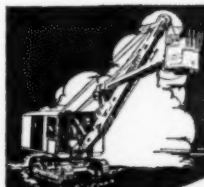
These machines have been completely rebuilt in our  
factory and carry the same guarantee as new equip-  
ment. Write or wire.

**NORTHWEST ENGINEERING CO.**

1833 Steger Building  
Chicago, Illinois  
U.S.A.

PULLSHOVELS

DRAGLINES





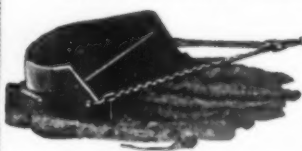


Manufacturers of Rails, Frogs, Switches, for Permanent and Portable Track. Complete line of Steel Posts for Fence and other purposes.

Catalog will be sent on request

**SWEET'S STEEL COMPANY**  
MANUFACTURERS  
WILLIAMSPORT PENNA.

### SAUERMAN "CRESCENT" SCRAPER



The World's lowest cost long-range excavator. Made in 15 sizes to handle from 10 to 600 tons per hour.

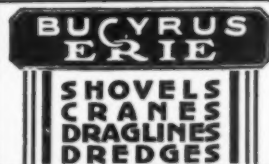
SAUERMAN BROS., INC.  
490 S. Clinton St. Chicago



### BOTTOM DUMPING and TURN-OVER BUCKETS

Write us for information on Contractors Buckets

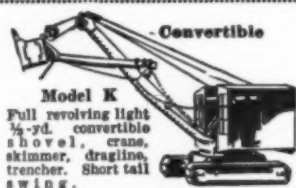
G. L. Stuebner Iron Works, Inc.  
Manufacturers of Material Handling Equipment  
So. Hancock St. Long Island City, N. Y.



### KNOWN RELIABILITY!

Bucyrus-Erie equipment is known the world over, for dependable, low-cost operation. Shovels, Draglines, Cranes—all sizes—Gas, Diesel, Electric, Gas + Air, Diesel + Air, Steam. Also Railway Cranes, Spreader Plows, etc. Write for bulletins.

BUCYRUS-ERIE COMPANY  
So. Milwaukee, Wis., Evansville, Ind., Erie, Pa.



### POWER SHOVELS Cranes, Trenchers SKIMMERS

Full or part circle

BAY CITY SHOVELS, Inc.  
Bay City, Mich.

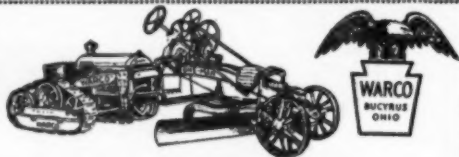


### WHITCOMB LOCOMOTIVES

2 to 100 TONS  
GEAR DRIVE AND OIL-ELECTRIC  
GASOLINE - DISTILLATE - DIESEL - BATTERY  
Write for Bulletins and Performance Data.  
GEO. D. WHITCOMB CO.  
ROCHELLE, ILLINOIS



Graders  
Crawlers  
Scoops



W.A. RIDDELL CO., BUCYRUS, O.



### EXCAVATORS DRAGLINES **P&H** SHOVELS CRANES

Get Bulletins with complete description of new models. Made in sizes from  $\frac{1}{2}$  to 4 cu. yds. All convertible.

HARNISCHFEGER CORPORATION  
3827 National Ave., Milwaukee, Wis.



### KIESLER CLAM SHELL BUCKETS

Send for latest catalogue

JOS. F. KIESLER CO.

936 W. Huron St.

Chicago, Ill.



### Hayward Buckets

"Dig for all the World"

THE HAYWARD COMPANY  
50-52 Church St., New York, N.Y.



### Owen Buckets

Stronger and Built to Last Longer, Owen Buckets get "A Mouthful at Every Bite" and More Bites Per Day.

OWEN BUCKET CO.

911 BREAKWATER AVE. CLEVELAND, OHIO.



## Your ADVERTISEMENT

in these pages places your facilities before the leaders in manufacturing and industrial operations in the South and Southwest, creating wider markets for your products.

♦ ♦

Advertising rates gladly submitted upon request

♦ ♦

MANUFACTURERS RECORD

Baltimore

Maryland

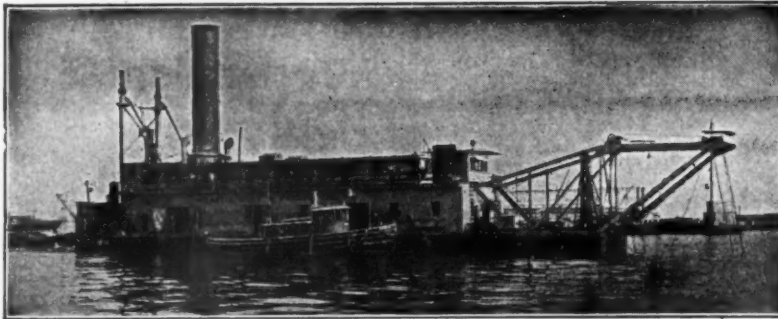
**LARGEST PLANT**

Filling,  
Land Reclamation,  
Canals  
and Port Work

River and Har-  
bor Improvements,  
Deep Waterways  
and Ship Channels.

Correspondence Invited  
from Southern Officials  
and Corporate and Pri-  
vate Interests Every-  
where.

NEW YORK  
21 Park Row

**DREDGING****LONGEST EXPERIENCE**

We are especially  
equipped to exe-  
cute all kinds of  
dredging, recla-  
mation and port  
works in South-  
ern waters.

CONTRACTORS  
TO THE  
FEDERAL GOVERNMENT

HOUSTON  
Scanlan Bldg.

**Atlantic, Gulf and Pacific Company**

**Hydraulic Dredges  
Dipper Dredges  
Sectional Steel Hulls and Barges**

**American Steel Dredge Co.**  
Fort Wayne, Indiana U. S. A.

**ELLICOTT MACHINE CORPORATION**

Hydraulic Dredges—Sand and Gravel Dredges  
Pumps for Sand, Gravel, Dredging  
Hydraulic Dredging Machinery  
Heavy Machinery

1111 Bush Street BALTIMORE, MD., U. S. A.

If interested in

Hoists, Derricks, Cableways

or special equipment write for this book

**"Your Own Success"**

Good tools and good equipment are essential to success.  
Lidgerwood machines have success built in them.

**Lidgerwood Manufacturing Company**

ELIZABETH, NEW JERSEY

Hoist and Derrick Headquarters  
for 57 years.

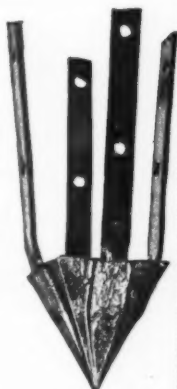
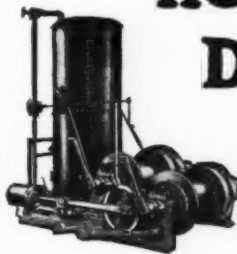
**PILE  
SHOES**

IN STOCK FOR  
QUICK SHIPMENT

Jos. A. Janney, Jr.  
Successor to  
Janney - Steinmetz  
& Co.

1421 Chestnut St.  
Philadelphia, Pa.

30 Church St.  
New York City

**HOISTS  
DERRICKS  
CABLEWAYS**

AN INQUIRY WILL NOT  
INCUR AN OBLIGATION

**STREET BROS. MACHINE WKS. INC.**  
Chattanooga, Tenn.

**MUNDY HOISTS**

Gasoline—Electric—Steam

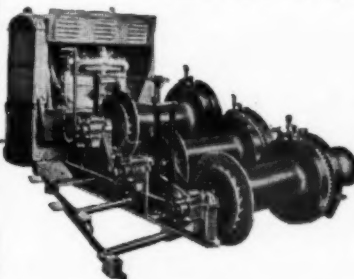
*Standard of the World*

CAR PULLERS  
CABLEWAYS

TRADE MARK  
**MUNDY**  
ESTABLISHED 1869

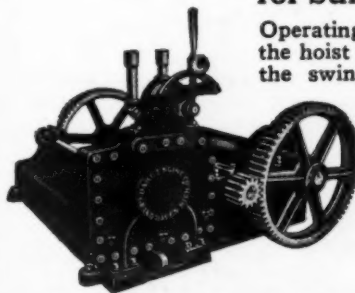
J. S. Mundy  
Hoisting Engine Co.

Frelinghuysen Ave.  
Newark, N. J.

**DAKE SWINGING ENGINES**

for bull wheel derricks

Operating independently of  
the hoist engine, they cut down  
the swinging time and speed  
up derrick work.



The engine has no  
dead centers and  
starts instantly  
from any position  
permitting quick  
accurate spotting  
of the load.

Also made for Electric Drive. Send for catalog.  
**DAKE ENGINE CO., Grand Haven, Mich.**



## SAND

Bank Building Concrete Paving

### WASHED GRAVEL

In Car, Scow and Barge Lots

COMMERCIAL BLAST FURNACE SLAG

### THE ARUNDEL CORPORATION

BALTIMORE, MD.

Office, PIER 2, PRATT STREET

Wharves: PIER 2, PRATT ST., and FOOT OF CLINTON ST.

### SAND-GRAVEL-BRICK FILTER GRAVEL

Washed Sand and Gravel for Concrete  
Roads and Buildings

Filter Gravel, all sizes—Building Bricks

FRIEND & CO., INC.

River St., Petersburg, Va.



for economy and perma-  
nence in Road Building and  
General Construction

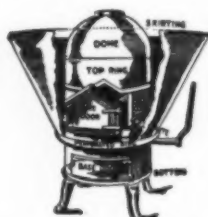
WOODSTOCK SLAG CORP.

Southern Railway Bldg., Birmingham, Ala.

## SAND DRYERS

(With or without External Gratings)

A portable machine, daily capacity 5 to 7 tons.



This dryer has a low first cost, is  
easily and cheaply operated and  
guaranteed dry sand.

The low cost makes it valuable  
for companies needing dry sand on  
two or more jobs at the same time,  
thereby eliminating the handling  
cost of one point only.

Write for descriptive pamphlet

The Ripley Foundry & Machine Co.

Ripley, Ohio

For Contractors, Railroads,  
Trolley Lines, Coal Com-  
panies, Industrial Plants,  
Foundries.

## CRUSHED LIMESTONE Best for All Purposes

We manufacture all sizes of stone suitable for all  
classes of road building and concrete work where  
only a high-grade limestone is required.

Quarries opened up in 1912.

Capacity 4000 tons daily.

### Quarries

Blue Ridge, Va. Pembroke, Va. Pounding Mill, Va.

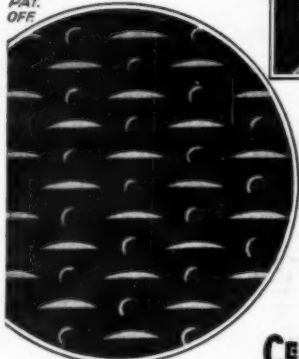
W. W. BOXLEY & COMPANY

Room 711, Boxley Building, - ROANOKE, VA.

Practical-  
Convenient-  
Durable-  
Economical-  
Safe.....



REG. U.S.  
PAT.  
OFF.



This exclusively designed plate,  
combining the above features, is  
indispensable for use on detours,  
bridge floors, railroad crossings,  
sink holes, factory yards and  
floors, expansion joints, etc. etc.

As treads on concrete roads  
they guide traffic and eliminate  
costly repairs, lasting indefinitely.

They offer safe traction for light  
or heavy loads. Send for litera-  
ture.

**CENTRAL IRON & STEEL Co.**

HARRISBURG, PENNA.

Branch Offices in Principal Cities

UNDERWRITERS'  
LABORATORIES  
INSPECTED S.A. 443

**CENTRAL FLOOR PLATES**

**FLOOR NEVERSLIP PLATES**

*"The Plate with Perfect Diamonds"*

**AMERICAN PRESSED STEEL Co.**

Commercial Trust Building—Philadelphia—Penn.

## DRYERS

FOR ALL MATERIALS

AMERICAN PROCESS CO.

Dodge Bldg.,  
53 Park Place

NEW YORK CITY

Crushed Stone  
Mascot Chatts Roofing Gravel  
Asphaltic Roadway Gravel  
Asphalt Filler Dust



AMERICAN LIMESTONE COMPANY  
KNOXVILLE TENNESSEE



# Only One Lunch Bucket comes to this pit



*And one self-propelled machine is the entire digging, screening and loading plant*



When the 7-o'clock whistle blows, only one man goes to work in this pit.

He's superintendent, engineer, operator, shovel gang, water boy and everything.

He and this brand new Barber-Greene One-Man Sand and Gravel Plant handle every operation—digging the material from the bank—elevating it to the screens—taking out the oversize—separating the sand and gravel—loading the sand or gravel into truck or wagon.

This plant is Barber-Greene Bucket Loader with a special built-in, high-frequency Leahy Screen.

The loader digs from bank and elevates the material to the primary screen that takes out oversize.

This screened material drops onto the Leahy Screen, which operates at 1600 v.p.m. for perfect separation of sand and gravel.

Either sand or gravel can be delivered into the waiting truck or wagon at  $\frac{1}{2}$  ton per minute rate, by throwing a lever.

Up, up goes efficiency and screening ability until it equals that of many big plants.

Down, down go costs, both initial and operating. One machine is the only investment. One machine is the only operating expense. One man is the entire operating force.

This latest Barber-Greene is the newest, most inexpensive answer for small pits—for infrequent operations—for townships or counties furnishing their own sand and gravel—for big pits demanding utmost flexibility.

To check its application to your own pit—and the costs—write today for information. We'll gladly send it to you, without asking you to obligate yourself in any way.

# BARBER

560 West Park Ave.



# GREENE

Aurora, Illinois



# REINFORCING for PERMANENCY

with

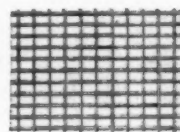
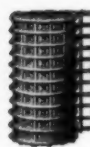
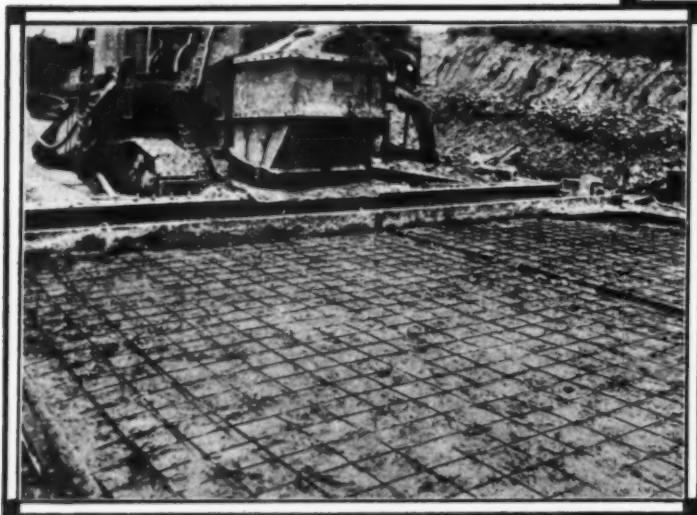
## AMERICAN STEEL & WIRE COMPANY

# WIRE FABRIC

### Keep the Highways Open

Present day traffic conditions—the great increase in bus transportation and the long hauls being made by heavy, destructive trucks—make it more essential than ever that pavements be constructed in the strongest manner possible. Strength, of course, means reinforcement—and this can best be assured through the use of wire fabric.

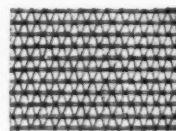
Data proves that pavements, properly reinforced with American Steel & Wire Company wire fabric, made of cold drawn steel, have a lasting good surface—are always open to traffic—and that maintenance costs are greatly reduced.



**Electric  
Weld**

**Furnished in Rolls or Sheets**

**Triangle  
Mesh**



Today—Write for your copy of "Reinforcing Roads and Streets" and "1929 Proceedings of American Road Builders Association."

## AMERICAN STEEL & WIRE COMPANY

208 S. La Salle Street, Chicago

Other Sales Offices: Atlanta Baltimore Birmingham  
Denver Detroit Kansas City Memphis Milwaukee  
Pittsburgh Salt Lake City St. Louis

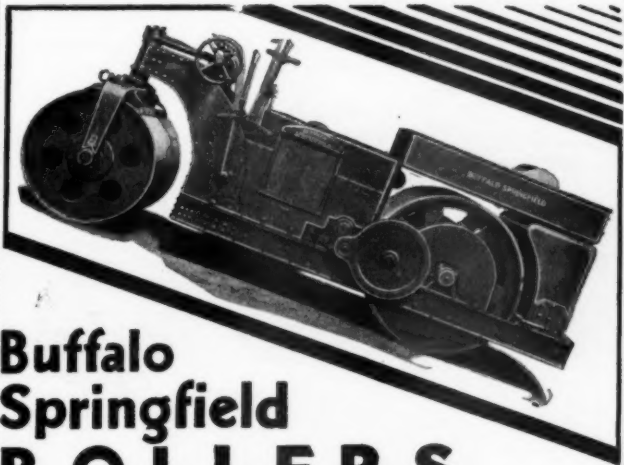
Pacific Coast Distributors: Columbia Steel Company,  
San Francisco Los Angeles Portland Seattle Honolulu

SUBSIDIARY UNITED STATES STEEL CORPORATION



30 Church Street, New York  
Boston Buffalo Cincinnati Cleveland Dallas  
Minneapolis-St. Paul Oklahoma City Philadelphia  
Wilkes-Barre Worcester

Export Distributors: United States Steel Products Co.,  
30 Church St., New York City



## Buffalo Springfield ROLLERS

for  
Service — Long Life

It is when adverse operating conditions demand an extra measure of stamina and agile power that Buffalo-Springfields show to best advantage. No matter how strenuous the road building or maintenance requirement, the Buffalo-Springfield Roller excites the admiration of the constructors and all others qualified to pass judgment.

Built in a wide range of models and sizes, both steam and motor driven, 2½ to 15 tons. Scarifier and other attachments optional.

Send for illustrated booklet.

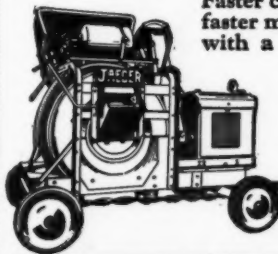
The Buffalo-Springfield Roller Co., Springfield, O.

## 1 and 2 Bag Jaeger Mixers



Speed King, one bag trailer outsells every other 7S mixer. Speed does it.

## Speed Up Your Job . . . . .

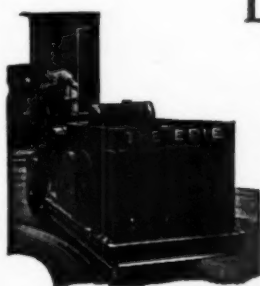


Faster concrete construction starts with faster mixing. Step up your batch rate with a Jaeger, the fastest 7S and 10S mixer ever put on wheels, the easiest to handle. Catalog and prices on request. Write.

**1000 Lbs. Lighter . . .**  
short coupled, direct driven 10S—handles like a 1-bag size.

**THE JAEGER MACHINE CO.**  
115 Dublin Ave. Columbus, Ohio

GET OUR PRICES ON MIXERS, PUMPS AND HOISTS



## Let the ERIE Roll It!

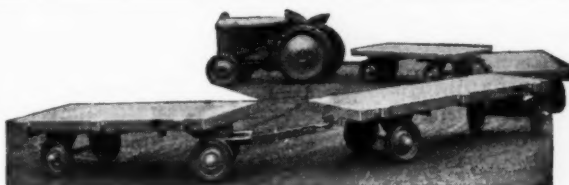
You save hand tamping costs when you use the ERIE Roller. Roll right up to curbs, headers, man-holes, and around the curves—

The ERIE turns in a shorter radius, steers more easily and has better clearance.

Write for Bulletin "M".

Erie Machine Shops  
Erie, Pa.

**ERIE ROLLERS**  
GAS AND STEAM SAME HIGH QUALITY



EWC TRAILERS are made for every industrial haulage purpose. Special trucks and trailers designed and built for individual requirements.

TRUCKS and WHEELS for mounting portable machinery of all kinds, any size and capacity.

TELL US your hauling problem and let us suggest the equipment for it.

## ELECTRIC WHEEL COMPANY

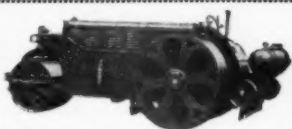
5 Ohio Street

QUINCY, ILL.

SEND FOR FREE CATALOG

**HUBER MFG. CO.**

310 E. CENTER ST. MARION-O.



**HUBER MOTOR ROLLERS**

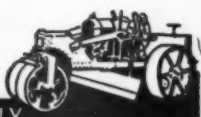
ACME ROAD MACHINERY



COMPANY, FRANKFORT, N.Y.

**ACME**  
Stone Crushers

ACME ROAD MACHY. CO. FRANKFORT, N.Y.



**SEAWALLS** WEBER SYSTEM

MANY DIFFERENT TYPES TO MEET EVERY CONDITION.

SAFEST AND MOST PERMANENT CONSTRUCTION.

ENORMOUS SAVING OF COST

FOR COMPLETE INFORMATION WRITE TO—

**SHORE-LINE BUILDERS, INC.**

JACKSONVILLE, FLORIDA.

WEBER SYSTEM

**BULKHEADS**

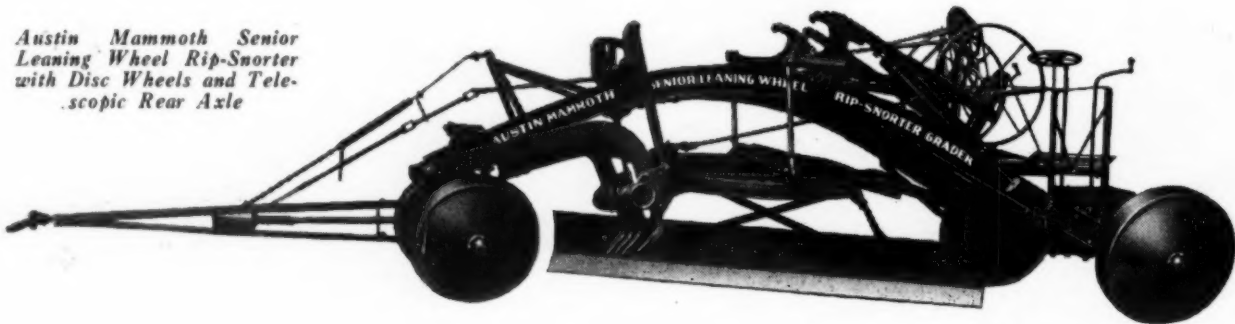
## ASPHALT PLANTS

**THE SIMPLICITY**  
SYSTEM COMPANY

CHATTANOOGA, TENNESSEE



*Austin Mammoth Senior  
Leaning Wheel Rip-Snorter  
with Disc Wheels and Tele-  
scopic Rear Axle*



# More work per horse power!

*This dual purpose Austin Rip-Snorter is typical of the exceptional values in the entire Austin-Western line*

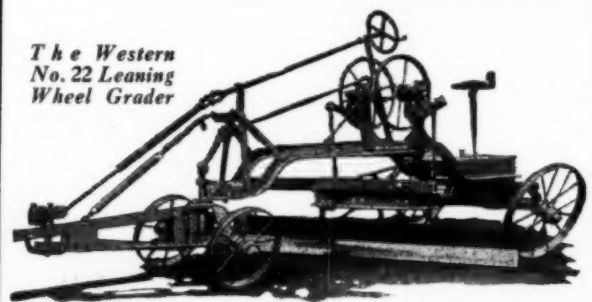
Grader and scarifier in one—a sturdy and well balanced outfit that bites into the hardest soil and keeps it rolling before the blade. A machine that tears up wornout roads or rough sub-grades and regrades in one operation, thus eliminating several slow and expensive operations.

The Austin Mammoth Senior Leaning Wheel Grader, equipped, with the Rip-Snorter scarifier as shown above, was the first combination grader-scarifier ever designed and is still the leader in its field. These machines are made in five sizes, ranging in weight from 5,300 to 11,200 pounds. Leaning or straight wheels may be had with all sizes, spoke or disc in the 12' and 10' models; spoke wheels only, in the three smaller sizes.

The famous and exclusive Austin Telescopic Axle may be had in all Austin leaning wheel graders. This valuable feature enables work to be done under difficult conditions with much greater efficiency than would be possible with graders having one-piece axles. This is just one of the many improvements to be found in Austin-Western Road Machinery—features which result in better, faster work and at less cost per mile, whatever the operation.

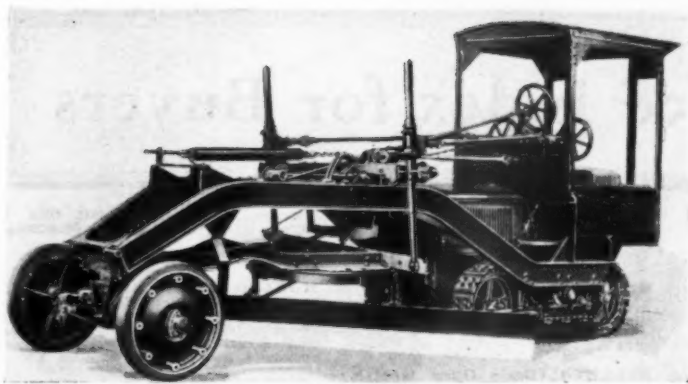
Write for complete information about the equipment you are most interested in. Special bulletins are available which provide much data of interest and value. Address: The Austin-Western Road Machinery Co., 400 North Michigan Avenue, Chicago, Illinois. Branches in principal cities.

*The Western  
No. 22 Leaning  
Wheel Grader*

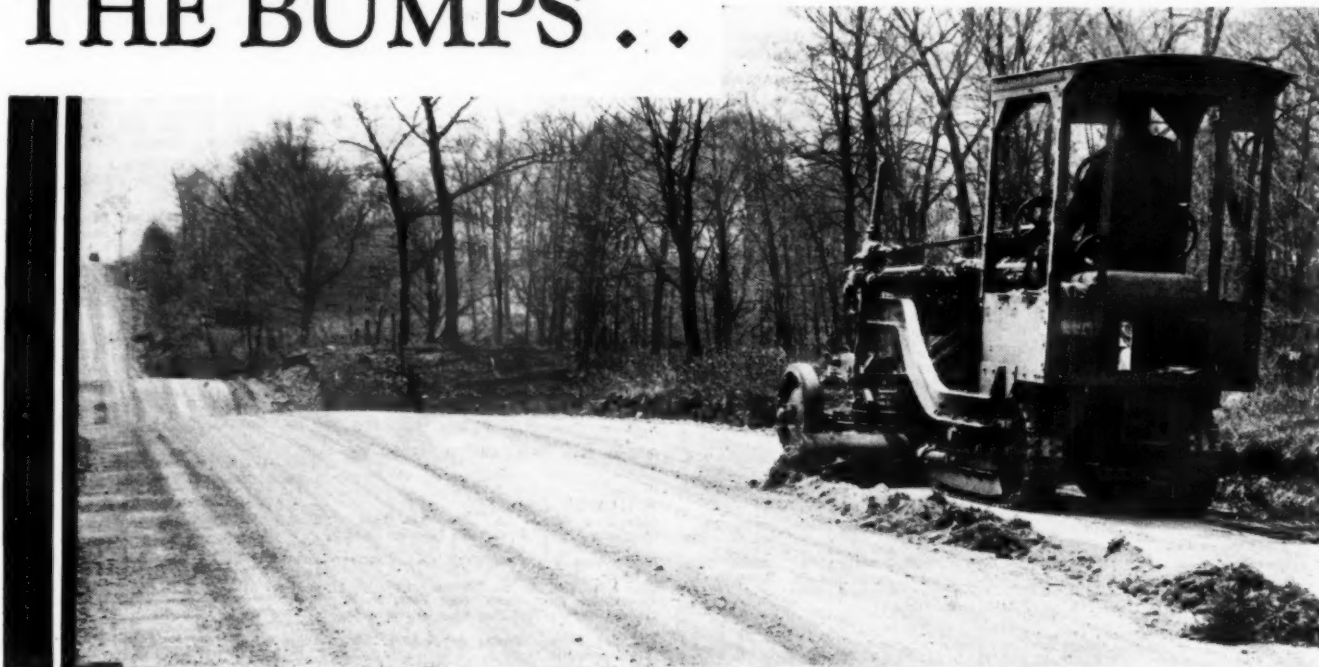


A strong, easily handled patrol grader that is also ideal for finishing shoulders, smoothing rough sub-grades, light grading and ditching. Has leaning wheels, shiftable rear axle and Timken bearings. Six horses or a light tractor can handle it. Can be supplied with a steerable offset engine hitch if desired. Write for details.

## Austin-Western ROAD MACHINERY



## NEW RIGIDITY THAT LICKS THE BUMPS . .



### Good-bye "Washboards"

SUCTION of pneumatic auto tires has left its problem—"washboards."

A chattering maintainer blade lays the foundation for these "washboards."

The Caterpillar Tractor Co. engineers have licked that problem.

A long screw lift, working in a long, bronze nut, connected to the circle cross-bar by big ball and socket, provides the answer. Here is extra-wearing surface. Here are precision machine-cut gears with powerful leverage. Here is self-locking

leverage that holds the blade *right there*—and the long tracks of the "Caterpillar" Tractor, bridging depressions, force that blade on a straight, even plane—the "washboards" are gone.

Prices—f. o. b. Peoria, Illinois

TEN . . . .	\$1100	TWENTY . .	\$1900
FIFTEEN . .	\$1450	THIRTY . .	\$2375
SIXTY . . .	\$4175		

### Caterpillar Tractor Co.

PEORIA, ILL. and SAN LEANDRO, CALIF., U. S. A.

Track-type Tractors      Combines      Road Machinery

(There's a "Caterpillar" Dealer Near You)

**CATERPILLAR**  
REG. U. S. PAT. OFF.  
**TRACTOR**



# Classified Reference Index for Buyers

## ABRASIVE MATERIALS.

Carborundum Co., Niagara Falls, N. Y.

## ACCOUNTANTS (Cert. and Cost.)

Black & Co., Baltimore, Md.  
Ernst & Ernst, New York, N. Y.  
Hollowell Gorham & Co., Greensboro, N. C.  
Le Baron, E. T., Jacksonville, Fla.

## AERIAL MAPS and SURVEYS.

Airmap Corp. of Amer., Brooklyn, N. Y.  
Lacey & Co., Jas. D., New York, N. Y.

## AIR COMPRESSORS (Stationary and Portable.)

Chicago Pneumatic Tool Co., New York.  
De Laval Steam Turbine Co., Tremont, N. J.  
General Electric Co., Schenectady, N. Y.  
Ingersoll-Rand Co., New York, N. Y.  
Nove Engine Co., Lansing, Mich.  
O. K. Clute & Moly. Co., Columbia, Pa.  
Quincy Compressor Co., Quincy, Ill.  
Sullivan Machinery Co., Chicago, Ill.  
Westinghouse Traction Brake Co., Wheeling, Pa.

## AIR CONDITIONING SYSTEMS.

Skinner Bros. Mfg. Co., St. Louis, Mo.  
Swartwout Co., Cleveland, Ohio.

## AIRPORTS.

Shaw Co., Russell E., St. Louis, Mo.

## ALUMINUM BRONZE POWDER.

Aluminum Co. of Amer., Pittsburgh.

## AMMONIA Valves and Fittings.

Vogt Mch. Co., Henry, Louisville, Ky.

## ANGLE IRON-WORKING MACHINERY.

Whitney Metal Tool Co., Rockford, Ill.

## APPRAISERS.

Baillinger Co., Philadelphia, Pa.  
Conard & Busby, Burlington, N. J.  
Main, Inc., Chas. T., Boston, Mass.

## ARCHITECTS.

Baillinger Co., Philadelphia, Pa.  
Bond, Geo. Harvey, Atlanta, Ga.  
Chase, Wm. J. J., Atlanta.  
Lindsey, Claude H., Jackson, Miss.  
Main, Inc., Chas. T., Boston, Mass.  
Milburn, Reister & Co., Wash., D. C.  
Meyer Co., Tilghman, Allentown, Pa.  
Simmons, Inc. & Associates, E. Stanley, Washington, D. C.  
Freacher & Co., Inc., G. Lloyd, Atlanta.  
Syrine & Co., J. E., Greenville, S. C.  
Wheeler, Walter H., Minneapolis, Minn.  
Widener Engineering Co., St. Louis, Mo.  
—(Golf Course, Landscape.)  
Draper, E. S., Charlotte, N. C.  
Miller & Assoc., Wendell F., Columbus, O.  
Spoon & Lewis, Greensboro, N. C.

## ARCHITECTS' SUPPLIES.

Weber Co., Inc., F., Philadelphia, Pa.

## ARCHITECTURAL BRONZE.

Chase Brass & Copper Co., Waterbury, Conn.

## —Iron Work.

Dietrich Brothers, Baltimore, Md.  
Virginia Bridge & Iron Co., Roanoke, Va.

## ASH Removal Systems (Gates, Hoppers, Quenchers, etc.)

Allen-Sherman-Hoff Co., Phila., Pa.

## —Guiding Systems.

Allen-Sherman-Hoff Co., Phila., Pa.

## —Storage Tanks (Cast Iron.)

Allen-Sherman-Hoff Co., Phila., Pa.

## ASPHALT.

Gulf Refining Co., Pittsburgh, Pa.

## —Filler.

American Limestone Co., Knoxville, Tenn.  
Serviced Pre-molded Products, Inc., Chicago, Ill.

## AUDITORS.

Black & Co., Baltimore, Md.  
Ernst & Ernst, New York, N. Y.  
Hollowell Gorham & Co., Greensboro, N. C.  
Le Baron, Ernest T., Jacksonville, Fla.

## BABBITT METAL.

Ryerson & Sons, Inc., Jas. T., St. Louis and New York.

## BACKFILLERS.

Austin Machinery Corp., Muskegon, Mich.  
Bushy Traction Ditcher Co., Findlay, O.  
Harnischfeger Corp., Milwaukee, Wis.  
National Equipment Corp. (Inlay, Parsons), Milwaukee, Wis.

## BALLAST (Railroad.)

American Limestone Co., Knoxville, Tenn.

## BANKERS and BROKERS.

Provident Savings Bank & Trust Co., Cincinnati, Ohio.  
Taylor, Wilson & Co., Inc., Cincinnati, Ohio.

## BANKS and TRUST COMPANIES.

Baltimore Commercial Bank, Balto., Md.  
Bank of Alabama, The, Easley, Ala.  
Bank of New York & Trust Co., N. Y.  
First and Merchants National Bank, Richmond, Va.  
Maryland Trust Co., Baltimore, Md.  
Mercantile Trust Co., Baltimore, Md.

## BARGES (Steel.)

American Bridge Co., New York, N. Y.  
McClintic-Marshall Co., Pittsburgh, Pa.

## BARB (Steel, Rounds, Flats, Hexagon and Squares.)

Carnegie Steel Co., Pittsburgh, Pa.  
Conners Steel Co., Birmingham, Ala.  
Gulf States Steel Co., Birmingham, Ala.  
Knoxville Iron Co., Knoxville, Tenn.  
Republic Steel Corp., Youngstown, Ohio.  
Ryerson & Son, Inc., Jas. T., St. Louis, and New York.  
Sweet's Steel Corp., Williamsport, Pa.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Timken Roller Bearing Co., Canton, Ohio.  
Virginia Bridge & Iron Co., Roanoke, Va.  
Youngstown Sheet & Tube Co., Youngstown, Ohio.

## BATTERIES (Storage.)

Electric Storage Battery Co., Phila., Pa.

## BEAMS, CHANNELS, ANGLES.

Belmont Iron Works, Philadelphia, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Virginia Bridge & Iron Co., Roanoke, Va.

## BEARINGS (Anti-friction.)

Hyatt Roller Bearing Co., Newark, N. J.  
Timken Roller Bearing Co., Canton, Ohio.

## —(Line Shaft.)

Wood's Sons Co., T. B., Chambersburg, Pa.

## —(Roller.)

Hyatt Roller Bearing Co., Newark, N. J.  
Timken Roller Bearing Co., Canton, Ohio.

## BELT (Chain.)

Diamond Chain & Mfg. Co., Indianapolis, Ind.

## —(Leather, Canvas, Rubber.)

Charlotte Leather Belting Co., Charlotte, N. C.

Republic Rubber Co., Youngstown, Ohio.

## —Dressing.

Dixon Crucible Co., Jas., Jersey City, N. J.

## —Conveyors.

Barber-Greene Co., Aurora, Ill.

## BENCH LEGS.

Angle Steel Steel Co., Plainwell, Mich.

## —Drawers (Steel.)

Angle Steel Steel Co., Plainwell, Mich.

## BENCHES AND TABLES.

(Steel.)  
Angle Steel Steel Co., Plainwell, Mich.

## BILLETS (Basic Open Hearth.)

Gulf States Steel Co., Birmingham, Ala.  
Republic Steel Corp., Youngstown, Ohio.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

## BINS (Drill and Reamer.)

Angle Steel Steel Co., Plainwell, Mich.

## —(Steel Loading.)

Blaw-Knox Co., Pittsburgh, Pa.

## BLASTING POWDER and Accessories.

D. Font de Nemours & Co., E. I., Wilmington, Del.  
Hercules Powder Co., Inc., Wilmington, Del.

## BLINDS (Venetian and Awning.)

Wilson Corp., The J. G., New York.

## BLOCKS (Chain.)

Harrington Co., The, Philadelphia, Pa.

## —TACKLE for Wire and Manila Rope.

Patterson Co., W. W., Pittsburgh.

## BLOWERS and Exhaust Fans.

National Blow Pipe & Mfg. Co., Ltd., New Orleans, La.

## BLOW PIPE SYSTEMS.

National Blow Pipe & Mfg. Co., Ltd., New Orleans, La.

Skinner Bros. Mfg. Co., St. Louis, Mo.

## BOILERS (New.)

Babcock & Wilcox Co., The, New York.  
Charleston Dry Dock & Machine Co., Charleston, S. C.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Cole Mfg. Co., E. D., Newman, Ga.  
Combustion Engr. Corp., New York, N. Y.  
Hedges Walsh Welding Co., Chattanooga, Tenn.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
Schofield's Sons Co., J. S., Macon, Ga.  
Titusville Iron Works Co., Titusville, Pa.  
Vort Mch. Co., Henry, Louisville, Ky.

## —(Used.)

Delta Equipment Co., Philadelphia, Pa.  
O'Brien Machinery Co., Philadelphia, Pa.  
Randle Machinery Co., The, Cincinnati, O.  
Zelnicke Supply Co., W. A., St. Louis.

## BOILER SETTINGS.

Harbison-Walker Refractories Co., Pittsburg.

## —Tubes.

Boiler Tube Co. of America, Pittsburgh.  
National Tube Co., Pittsburgh, Pa.  
Ryerson & Son, Inc., Jas. T., St. Louis and New York.

## —Tubes (Charcoal, Iron.)

Reading Iron Co., Reading, Pa.

## BOLTS, Rivets, Studs, Washers.

Behlshem Steel Co., Bethlehem, Pa.  
Progressive Mfg. Co., Torrington, Conn.  
Republic Steel Corp., Youngstown, Ohio.  
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.  
Ryerson & Son, Inc., Jas. T., St. Louis and New York.

Virginia Bridge & Iron Co., Roanoke, Va.

## —(Track.)

Sweet's Steel Co., Williamsport, Pa.

## BOND BUYERS.

Gurway & Co., S. G., Chicago.  
Hendricks Bond Co., Inc., The, Chicago.  
Law & Co., A. M., Spartanburg, S. C.  
Marx & Co., Birmingham, Ala.  
Mercantile Trust Co., Baltimore, Md.  
Nurven & Co., John, Chicago, Ill.  
Provident Savings Bank and Trust Co., Cincinnati, Ohio.

Seasongood & Mayer, Cincinnati, Ohio.  
Taylor, Wilson & Co., Inc., Cincinnati, Ohio.

## BORING (Core.)

Mott Core Drilling Co., Huntington, W. Va.  
Pennsylvania Drilling Co., Pittsburgh, Pa.  
Southern Drilling Co., Saltville, Va.  
Sprague & Henwood, Inc., Scranton, Pa.

## BOXES (Paper.)

Old Dominion Box Co., Lynchburg, Va.

## BRASS GOODS.

Chase Brass & Copper Co., Waterbury, Conn.  
Copper and Brass Research Assn., New York.  
Mueller Co., Decatur, Ill.

## BRICK (Common Building.)

Friend & Co., Inc., Petersburg, Va.

## —(Face.)

Alabama Clay Prod. Co., Birmingham.

## —(Fire.)

Alabama Clay Prod. Co., Birmingham.  
Cambria Clay Products Co., Blackfork, O.  
Dee Co., Wm. E., Oak Hill, Ohio.  
Taylor Sons Co., Charles, Cincinnati.

## —(Vitrified, Paving.)

National Paving Brick Mfrs. Assn., Washington, D. C.

## —and Clayworking Machy.

Dunn Mfg. Co., W. H., Holland, Mich.  
Steel & Sons, J. C., Statesville, N. C.

## BRIDGES (Asphalt Paving.)

Serviced Pre-molded Products, Inc., Chicago, Ill.

## —Operating Machinery

Earle Gear & Machine Co., Phila., Pa.

## —Timber.

Amer. Crocoting Co., Louisville, Ky.  
Industrial Lumber Co., Elizabeth, La.  
Kirby Lumber Co., Houston, Texas.

## BRIDGES (Concrete.)

Atlantic Bridge Co., Greensboro, N. C.

## —(Crescoted Wood.)

Atlantic Bridge Co., Greensboro, N. C.

## —(Steel.)

American Bridge Co., New York, N. Y.  
Atlantic Bridge Co., Greensboro, N. C.  
Belmont Iron Works, Philadelphia, Pa.  
Bristol Steel & Iron Works, Inc., Bristol, Va.  
Champion Bridge Co., Wilmington, O.  
Converse Bridge & Steel Co., Chattanooga, Tenn.  
Ingalls Iron Works Co., Birmingham, Ala.  
McClintic-Marshall Co., Titusville, Pa.  
Nashville Bridge Co., Nashville, Tenn.  
Richmond Struc. Steel Co., Richmond, Va.  
Virginia Bridge & Iron Co., Roanoke, Va.

## BRONZE (Architectural.)

Heath Company, J. S., Waukegan, Ill.

## —(Machine.)

Moosasin Brushing Co., Chattanooga, Tenn.

## BURBLERS.

Rundle-Spence Mfg. Co., Milwaukee, Wis.  
Taylor Co., Halsey W., Warren, Ohio.

## BUCKETS (Clam Shell.)

Blaw-Knox Co., Pittsburgh, Pa.  
Hayward Co., The, New York, N. Y.  
Industrial Brownhoist Corp., Cleveland, O.  
Kiesler Co., Jos. F., Chicago, Ill.  
Owen Bucket Co., The, Cleveland, Ohio.  
Stuebner Iron Works, G. L., Long Island City, N. Y.

## —(Dredging, Excavating, Sewer, etc.)

Harward Co., The, New York, N. Y.  
Moulton Mfg. Corp., Chicago, Ill.  
Kiesler Co., Jos. F., Chicago, Ill.

Owen Bucket Co., The, Cleveland, Ohio.

Stuebner Iron Works, G. L., Long Island City, N. Y.

## —(Elevator.)

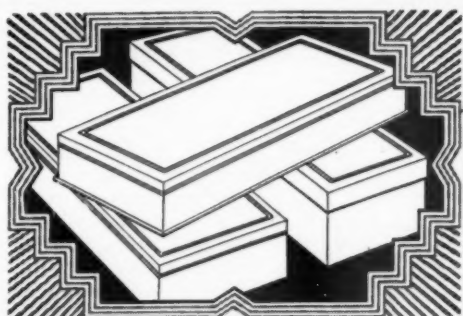
Hendrick Mfg. Co., Carbondale, Pa.  
Webster & Waller Mfg. Companies, Chicago, Ill.

## —(Orange Peel.)

Hayward Co., The, New York, N. Y.

## —(Ore Handling.)

Hayward Co., The, New York, N. Y.  
Owen Bucket Co., The, Cleveland, Ohio.  
Stuebner Iron Works, G. L., Long Island City, N. Y.



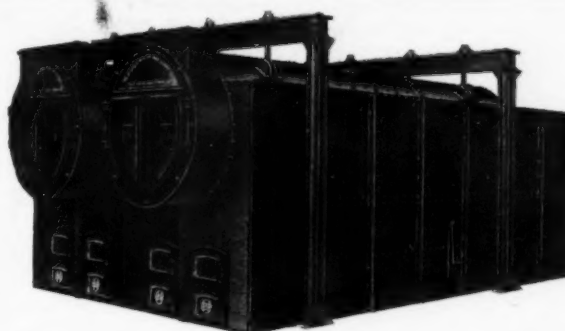
## 'Individualized' paper boxes for all TEXTILE PRODUCTS

Old Dominion paper boxes are distinctly different from any boxes you have ever used. In them you get that certain "individuality" that makes them stand out above all others. Especially made to fit your products and printed in any color combination with your trade-mark or special design. Our five centrally located Southern plants can give you a quick service and low freight rates. Write our nearest plant for samples and quotations.

OLD DOMINION BOX COMPANY, INC.  
Lynchburg, Va.

Winston-Salem, N. C. Burlington, N. C. Ashboro, N. C. Charlotte, N. C.

*quality* **OLD DOMINION  
Paper Boxes**



## RETURN TUBULAR BOILERS

STEEL CASINGS

STACKS

BREECHINGS

TANKS for every purpose

FABRICATED STEEL PLATES

Up to 3" Thick

WRITE FOR PRICES

THE HEDGES WALSH WEIDNER CO.

Main Office and Works

CHATTANOOGA, TENNESSEE

EASTERN OFFICE

200 MADISON AVE., NEW YORK, N. Y.

Subsidiary International Combustion Engineering Corporation



## Brass and Copper

Immediate delivery from  
18 convenient warehouses

CHASE BRASS & COPPER CO.—Incorporated—  
Waterbury, Conn.

**TITUSVILLE**

THE  
TITUSVILLE  
IRON WORKS CO.  
TITUSVILLE, PENNA.

## POWER AND HEATING BOILERS

FOR ALL  
INDUSTRIAL REQUIREMENTS

## CHARLESTON DRY DOCK & MACHINE CO.

SUCCESSORS TO YALK & MURDOCH CO.

MARINE AND STATIONARY BOILERS  
Repairs to Steel and Wooden Vessels

8,000-ton Dry Dock—1,500 and 600-ton Marine Railways  
CHARLESTON, S. C.

## From One Source

You can secure your entire steel requirements from Bethlehem — with the assurance that each item is as good and dependable as the facilities of a completely equipped organization with years of experience can make it.

BETHLEHEM STEEL COMPANY

General Offices: Bethlehem, Pa.

District Offices: New York, Boston, Philadelphia, Baltimore, Washington, Atlanta, Pittsburgh, Buffalo, Cleveland, Cincinnati, Detroit, Chicago, St. Louis.

Pacific Coast Distributor: Pacific Coast Steel Corporation, San Francisco, Los Angeles, Portland, Seattle, Honolulu.

**BETHLEHEM**

## BOILERS—SAW MILLS

Largest Works of the Kind in the South  
Engines—Pumps—Boiler Tubes—Grate Bars—Castings  
LOMBARD IRON WORKS & SUPPLY CO.  
AUGUSTA, GA.  
Reinforcing Bars—Structural, Bar and Sheet Steel  
Parts and Repairs Belting—Packing

## TANKS—STACKS

High Temperature Cements

**FIREBOND THERMOLITH**

REFRACTORIES

Fireclay High-Alumina Silica Chrome Magnesite

Acid-Proof Brick

HARBISON-WALKER REFRACTORIES CO.  
World's Largest Producer of Refractories Pittsburgh, Pa.



**BUILDERS and Contractors.**

Harstow & Co., W. S., Reading, Pa.  
Copper Co., Inc., The John W., Richmond, Va.  
Moyer Co., Tilghman, Allentown, Pa.  
Stone & Webster, Inc., Boston, Mass.  
Thompson & Bros., T. C., Charlotte, N. C.  
White Engineering Corp., J. G., New York.

**BUILDINGS (Industrial.)**

Belmont Iron Works, Philadelphia, Pa.  
Blaw-Knox Co., Pittsburgh, Pa.  
Braden Steel Corp., Tulsa, Okla.  
Butler Mfg. Co., Kansas City, Mo.  
Maryland Metal Building Co., Balto., Md.  
McClintic-Marshall Co., Pittsburgh, Pa.  
Nashville Bridge Co., Nashville, Tenn.  
Truscon Steel Co., Youngstown, Ohio.  
Virginia Bridge & Iron Co., Roanoke, Va.

**—(Portable Sheet Metal.)**

Braden Steel Corp., Tulsa, Okla.  
Butler Mfg. Co., Kansas City, Mo.  
Maryland Metal Building Co., Balto., Md.

**BULKHEADS.**

Shore-Line Builders, Inc., Jacksonville, Fla.  
Snare Corp., Frederick, New York, N. Y.

**BULLDOZERS.**

Trackcon Co., Milwaukee, Wis.

**BUSHINGS (Brass and Bronze.)**

Mocassin Bushing Co., Chattanooga, Tenn.

**BUSINESS METHODS.**

Ernst & Ernst, New York, N. Y.

**CABINETS (Steel.)**

Angle Steel Stool Co., Plainwell, Mich.

**CABLES (Stud Link.)**

Woodhouse Chain Works, Trenton, N. J.

**—and Wire (Electric.)**

American Steel & Wire Co., Balto., Md.  
Okonite Co., New York, N. Y.  
Roebbing's Sons Co., John A., Trenton, N. J.  
Western Electric Co., New York City.

**CABLEWAYS (Overhead Suspension.)**

Broderick & Bascom Rope Co., St. Louis  
Lidgerwood Mfg. Co., Elizabeth, N. J.  
Sauerman Bros., Chicago, Ill.

**CALCIUM CHLORIDE.**

Grasselli Chemical Co., Inc., Birmingham, Ala.

**CAN and Box-Making Machinery (Tin.)**

Bliss Co., E. W., Brooklyn, N. Y.

**CAR Loaders and Unloaders.**

Barber-Greene Co., Aurora, Ill.  
Stephens-Adams Mfg. Co., Birmingham, Ala.

**—Pullers.**

Webster & Weller Mfg. Companies, Chicago, Ill.

**CARS (Dump, Industrial, Logging and Mine.)**

Atlas Car & Mfg. Co., The, Cleveland, O.  
Easton Car & Construction Co., Easton, Pa.  
Koppel Ind. Car & Equip. Co., Koppel, Pa.  
Southern Iron & Equipment Co., Atlanta.

**—Steps (Safety.)**

Irving Iron Works Co., Long Island City, N. Y.

**CASTINGS (Brass, Bronze and Aluminum.)**

Inter-State Fdry. & Mach. Wks., Johnson City, Tenn.  
Mocassin Bushing Co., Chattanooga, Tenn.  
Mountain States Steel Foundries, Parkersburg, W. Va.

**—(Chilled Iron.)**

Fuller Lehigh Co., Fullerton, Penna.

**—(Gray Iron.)**

Fuller Lehigh Co., Fullerton, Penna.  
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.  
Inter-State Fdry. & Mach. Wks., Johnson City, Tenn.  
National Cast Iron Pipe Co., Birmingham, Ala.  
Roanoke Iron & Bridge Works, Inc., Roanoke, Va.  
Salem Fdry. & Mach. Wks., Salem, Va.  
U. S. Pipe & Foundry Co., Burlington, N. J.

**—(Malleable Iron and Steel.)**

Timken Roller Bearing Co., Canton, O.

**—(Semi-Steel.)**

Salem Fdry. & Machine Works, Salem, Va.

**—(Steel.)**

Bethlehem Steel Co., Bethlehem, Pa.  
Crucible Steel Casting Co., Lansdowne, Delaware Co., Pa.  
Deemer Steel Casting Co., New Castle, Del.  
Lunkenheimer Co., Cincinnati, Ohio.

**CEILINGS (Metal.)**

Milcor Steel Co., Milwaukee, Wis.

**CEMENT (High Temperature.)**

Harbison Walker Refractories Co., Pittsburg.

**—(Portland.)**

Alpha Portland Cement Corp., Birmingham, Ala.  
Lehigh Portland Cement Co., New York.  
Louisville Cement Co., Louisville, Ky.  
Portland Cement Assn., Chicago, Ill.

**—Guns.**

Cement-Gun Co., Inc., Allentown, Pa.

**—Machinery.**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

**CHAIN BLOCKS (See Blocks, Chain.)****CHAINS (Dredge, Quarry, Steam Shovel.)**

Knoxville Iron Co., Knoxville, Tenn.  
Woodhouse Chain Works, Trenton, N. J.

**—(High Speed Roller.)**

Diamond Chain & Mfg. Co., Indianapolis.

**—(Silent Drive.)**

Diamond Chain & Mfg. Co., Indianapolis.

**—(Sprocket.)**

Chain Belt Co., Milwaukee, Wis.  
Diamond Chain & Mfg. Co., Indianapolis.

**—(Welded.)**

Woodhouse Chain Works, Trenton, N. J.

**CHAIRS (Opera and Theatre.)**

Andrews Co., A. H., Chicago, Ill.

**—and Stools (Steel.)**

Angle Steel Stool Co., Plainwell, Mich.

**CHEMICALS.**

Davison Chemical Co., Baltimore, Md.  
Grasselli Chemical Co., Inc., Birmingham, Ala.

**CHEMISTS, CHEMICAL ENGINEERS (Analytical.)**

Barrow-Agass Laboratories, Memphis, Tenn.  
Flood & Co., Walter H., Chicago, Ill.  
Froehling & Robertson, Inc., Richmond, Va.  
Hunt Co., Robert W., Chicago, Ill.  
Meigs, Bassett & Slaughter, Phila., Pa.  
Picard Laboratories, The, Birmingham, Ala.  
Pittsburgh Testing Laboratories, Pittsburgh, Pa.  
Southwestern Laboratories, Fort Worth, Texas.  
Sullivan & Van Stien, New York.  
Wiley & Co., Inc., Baltimore, Md.

**—(Consulting, Paper Industry.)**

Froehling & Robertson, Inc., Richmond, Va.

**CHIMNEYS (Concrete.)**

Rust Engineering Co., Birmingham, Ala.

**—(Radial Brick.)**

Rust Engineering Co., Birmingham, Ala.

**CHLORIDE ACCUMULATOR.**

Electric Storage Battery Co., Phila., Pa.

**CHLORINATORS.**

Rees, S. P., Atlanta.

**CIRCUIT BREAKERS.**

I. T. E. Circuit Breaker Co., Phila., Pa.  
Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

**CITY AND TOWN PLANNING.**

Draper, E. S., Charlotte, N. C.  
Ludlow Engineers, Winston-Salem, N. C.

**CLOCKS (For all purposes.)**

Kaiser Clock Co., L. E., Baltimore, Md.

**—(Watchman's Portable.)**

Davis-Paradis Watchman's Clock Corp., New York, N. Y.

Kaiser Clock Co., L. E., Baltimore, Md.

**CLUTCHES (Friction.)**

Caldwell Co., Inc., W. E., Louisville, Ky.  
Schultz & Son, A. L., Chicago, Ill.  
Wood's Sons Co., T. B., Chambersburg, Pa.

**COAL (Bituminous.)**

Sloss-Sheffield Steel & Iron Co., Birmingham, Ala.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

**—and Ash-Handling Mech.**

Allen-Sherman-Hoff Co., Phila., Pa.  
Chain Belt Co., Milwaukee, Wis.  
Hayward Co., The, New York, N. Y.  
Industrial Brownhoist Corp., Cleveland, O.  
Northwest Engineering Co., Chicago.  
Stephens-Adams Mfg. Co., Birmingham, Ala.  
Webster & Weller Mfg. Companies, Chicago, Ill.

**—Bunkers (Cast Iron.)**

Allen-Sherman-Hoff Co., Phila., Pa.

**—Tipples.**

American Bridge Co., New York, N. Y.  
Virginia Bridge & Iron Co., Roanoke, Va.

**COCKS (Service.)**

Marco Nordstrom Valve Co., San Francisco, Calif.

**COKE.**

Sloss-Sheffield Steel & Iron Co., Birmingham, Ala.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

**COLUMNS (Cast Iron.)**

U. S. Pipe & Foundry Co., Burlington, N. J.

**COMPRESSORS.**

Union Steam Pump Co., Battle Creek, Mich.

**—(Gasoline Extraction.)**

Sullivan Machinery Co., Chicago, Ill.

**CONCRETE (Block Machinery.)**

Blystone Mfg. Co., Cambridge Springs, Pa.

**—Construction (Reinforced.)**

Cement-Gun Co., Inc., Allentown, Pa.  
Cement Gun Construction Co., Chicago.  
Rust Engineering Co., Birmingham, Ala.

**—Floor Slabs.**

American Cement Tile Mfg. Co., Pittsburgh, Pa.

**—Information Only.**

Portland Cement Assn., Chicago, Ill.

**—Mixers.**

Blystone Mfg. Co., Cambridge Springs, Pa.  
Chain Belt Co., Milwaukee, Wis.  
Dunning & Boschert Press Co., Inc., Syracuse, N. Y.  
Jaeger Machine Co., Columbus, Ohio.  
Lansing Co., Lansing, Mich.

**—Pipe Machinery (See Pipe Machinery, Concrete.)****—Placing Equipment.**

National Equipment Corp. (Insley Division), Milwaukee, Wis.

**—Road Curing.**

McEverlast, Inc., Los Angeles, Cal.

**—Roofing Tile.**

American Cement Tile Mfg. Co., Pittsburgh, Pa.

**CONDENSERS.**

Chicago Pneumatic Tool Co., New York.  
Ingersoll-Rand Co., New York, N. Y.  
Manistee Iron Works Co., Manistee, Mich.  
Union Steam Pump Co., Battle Creek, Mich.  
Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

**CONDUITS (Electric, Interior, Steel.)**

Western Electric Co., New York City.  
Youngstown Sheet & Tube Co., Youngstown, Ohio.

**CONTRACTORS (Airports.)**

Miller & Asso., Wendell P., Chicago.

**—(Bridge.)**

Kansas City Bridge Co., Kansas City, Mo.  
Snare Corp., Frederick, New York.

**—(Drainage and Dredging.)**

Arundel Corp., The, Baltimore, Md.  
Atlantic Gulf and Pacific Co., New York.

**—(Electrical.)**

Industrial Electrical Co., Savannah, Ga.  
Walker Electrical Co., Atlanta, Ga.  
Warner Service Co., Knoxville, Tenn.  
Webb Electric Co., Anderson, S. C.

**—(Foundations and Dams.)**

Calligan & Co., A. H., Richmond, Va.  
Snare Corp., Frederick, New York, N. Y.

**—(General.)**

Angle-Blackford Co., Greensboro, N. C.  
Blair, Algernon, Montgomery, Ala.  
Charleston Constructors, Inc., Charleston, S. C.  
Cornell-Young Co., Inc., Marion, Ga.  
Copper Co., Inc., The John W., Richmond, Va.  
Flske-Carter Constr. Co., Greenville, S. C.

Gridley Constr. Co., Lee A., Knoxville, Tenn.  
Saville, Inc., Allen J., Richmond, Va.  
Snare Corp., Frederick, New York, N. Y.  
Stone & Webster, Inc., Boston, Mass.  
Thompson & Bros., T. C., Charlotte, N. C.  
Tucker & Laxton, Charlotte, N. C.  
White Engineering Corp., J. G., New York.

**—(Industrial Buildings.)**

Angle-Blackford Co., Greensboro, N. C.  
Barstow & Co., W. S., Reading, Pa.  
Blair, Algernon, Montgomery, Ala.  
Copper Co., Inc., The John W., Richmond, Va.  
Flske-Carter Constr. Co., Greenville, S. C.  
Snare Corp., Frederick, New York, N. Y.  
Stone & Webster, Inc., Boston, Mass.  
Thompson & Bros., T. C., Charlotte, N. C.  
Tucker & Laxton, Charlotte, N. C.  
White Engineering Corp., J. G., New York.

**—Mill Village.**

Hornbuckle Contracting Co., Atlanta, Ga.

**—(Plastering.)**

Gomez & Co., P. L., Atlanta, Ga.  
Jennings & Co., Floyd, Atlanta, Ga.

**—(Power Piping.)**

Poe Piping & Heating Co., Greenville, S. C.

**—(Power Plants.)**

Snare Corp., Frederick, New York, N. Y.

**—(Railroad.)**

Calligan & Co., A. H., Richmond, Va.  
Cornell-Young Co., Inc., Marion, Ga.

**—(Reinforced Concrete.)**

Blair, Algernon, Montgomery, Ala.  
Cement Gun Construction Co., Chicago.  
Guite Conc. & Constr. Co., Kansas City.  
Tucker & Laxton, Charlotte, N. C.

**—(Road and Street Paving.)**

Flske-Carter Constr. Co., Greenville, S. C.  
Gridley Constr. Co., Lee A., Knoxville, Tenn.  
Hornbuckle Contracting Co., Atlanta, Ga.  
McCrary Co., The J. B., Atlanta, Ga.

**—(Rust Proofing.)**

Dixie Electro Plating Co., Houston, Tex.

**—(Sewerage and Waterworks.)**

Gridley Constr. Co., Lee A., Knoxville, Tenn.  
Hardaway Contracting Co., Columbus, Ga.  
Hornbuckle Contracting Co., Atlanta, Ga.  
McCrary Co., The J. B., Atlanta, Ga.  
Snare Corp., Frederick, New York, N. Y.  
Tucker & Laxton, Charlotte, N. C.

**—(Sprinkler System.)**

Poe Piping & Heating Co., Greenville, S. C.

**—(Swimming Pool.)**

Rees, S. P., Atlanta, Ga.

**—(Water-Works.)**

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

**—Machinery and Supplies.**

(New.)  
Bay City Shovels, Inc., Bay City, Mich.  
Weller & Co., Birmingham, Ala.  
W-K-M Co., Inc., Houston, Texas.

**—Machinery and Supplies.**

(Used.)  
Christian & Co., J. R., Houston, Tex.  
Cohen, Chas. F., Lima, O.  
Equip. Sales & Rentals Co., Pittsburgh.  
Gutten, Harry P., New York, N. Y.  
Johnson & Hoehler, Fernwood, Pa.  
Marine Metal & Supply Co., New York.  
Penn Machinery Co., H. O., New York.

**CONTRACT WORK WANTED.**

(See following classifications.)

**Boiler and Tank Works.**

Castings.  
Forgings.  
Foundry and Machine Shops.  
Machinery (Special).  
Ornamental Iron Work.  
Patterns.  
Sheet Metal Work.  
Structural Steel and Iron.  
Welding Plants.

**CONVEYING AND ELEVATING****MACHINERY.**

Barber-Greene Co., Aurora, Ill.  
Chain Belt Co., Milwaukee, Wis.  
McLanahan-Stone Machine Co., Hollidaysburg, Pa.  
Stephens-Adams Mfg. Co., Birmingham, Ala.  
Universal Crusher Co., Cedar Rapids, Iowa.  
Webster & Weller Mfg. Companies, Chicago, Ill.

**CONVEYORS (Portable, Power-Driven.)**

Clark Tractor Co., Battle Creek, Mich.

**CORRESPONDENCE SCHOOLS.**

International Correspondence Schools, Scranton, Pa.

**COST SERVICE.**

Le Baron, E. T., Jacksonville, Fla.

## The Davison Chemical Company

Manufacturers and Distributors of

All Grades of

**SULPHURIC ACID  
SUPERPHOSPHATE  
DOUBLE SUPERPHOSPHATE**

Main Plant, Baltimore: Pyrites Deposits Cienfuegos District, Cuba; Phosphate Rock Plant, Southern Phosphate Corporation, Bartow, Florida.

Fertilizer Plants: Maryland 11; Virginia 9; Pennsylvania 10; Georgia 2; Ohio 2; North Carolina 11; South Carolina, Mississippi, Louisiana, Texas, Indiana, West Virginia, Tennessee, Connecticut and New Jersey 1 each.

Main Office: Baltimore Trust Building, Baltimore

## QUALITY PIG IRON

PLUS

*Intelligent Cupola Service*

**SLOSS-SHEFFIELD STEEL & IRON CO.**  
BIRMINGHAM, ALA.

BRICK—CHIMNEYS—CONCRETE

**BOILER BRICKWORK**

**The Rust Engineering Co.**

*Engineers and Contractors*

BIRMINGHAM, ALA.

PITTSBURGH—WASHINGTON—NEW YORK—CHICAGO

## EASTON CARS



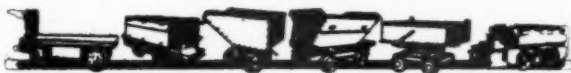
for every industrial purpose

Any type to your or our design

**EASTON CAR & CONSTRUCTION CO.**

10 E 40th Street, New York City. EASTON, PENNA.  
PHILADELPHIA PITTSBURGH CHICAGO

## INDUSTRIAL CAR EQUIPMENT



**THE ATLAS CAR & MANUFACTURING CO.**  
Cleveland, Ohio



**CARS KOPPEL TRACK**

KOPPEL

for all engineering and industrial uses

KOPPEL

**KOPPEL INDUSTRIAL CAR & EQUIPMENT CO.**  
SAN FRANCISCO KOPPEL, PA. PITTSBURGH



**WOODHOUSE CHAINS**

Stand the Gaff

**WOODHOUSE CHAIN WORKS**

Trenton New Jersey

## Every Belt Conveyor Deserves S-A CARRIERS

Gauge a conveyor carrier by the ultimate cost of handling material not by the initial purchase price. Mechanical advantages resulting from sound design assure years of dependable service life with these S-A carriers.

Write for interesting description of the newer type S-A carriers.

**SOUTHERN SALES OFFICE**

1108 Martin Bldg.

BIRMINGHAM, ALABAMA



## STEPHENS-ADAMSON

STEPHENS-ADAMSON MFG. CO.,

Aurora, Illinois — Los Angeles, California — Belleville, Ontario, Canada

## FIFTY YEARS

Experience in the designing and manufacturing of

## MATERIAL HANDLING EQUIPMENT

puts us in a position to supply equipment of proven worth at the lowest possible price.

*Call on us for*

**Apron Conveyors**

**Belt Conveyors**

**Chain Conveyors**

**Gravity Roll Conveyors**

**Spiral Conveyors**

**Bucket Elevators**

**Elevator Buckets**

**Skip Hoists**

**Car Pullers**

**Sheet Metal and Structural Steel Work**

**THE WEBSTER & WELLER MFG. COMPANIES**

1820-1856 N. Kostner Ave.

**CHICAGO, ILL.**

*Offices in the principal cities*



**COTTON GIN MACHINERY.**

Continental Gin Co., Birmingham, Ala.

**—Mill Machinery.**

Southern Spindle &amp; Flyer Co., Inc., Charlotte, N. C.

**COUNTING APPARATUS.**

Veeder-Root, Inc., Hartford, Conn.

**COUPLINGS.**

Goldens' Fdy. &amp; Mach. Co., Columbus, Ga.

**—(Shaft.)**

Wood's Sons Co., T. B., Chambersburg, Pa.

**CRANES.**Austin Machinery Corp., Muskegon, Mich.  
Buckeye Traction Ditcher Co., Findlay, O.  
National Equipment Co. (Insley, Keohring, Parsons), Milwaukee, Wis.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The Lorain, Ohio.  
Whiting Corp., Harvey, Ill.**—(Cantilever.)**

Whiting Corp., Harvey, Ill.

**—(Crawler.)**Buckeye Traction Ditcher Co., Findlay, O.  
Harnischfeger Corp., Milwaukee, Wis.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The Lorain, Ohio.**—(Crawling Tractor.)**Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The Lorain, Ohio.**—(Electric Traveling.)**Harnischfeger Corp., Milwaukee, Wis.  
Milwaukee Elec. Crane & Hoist Corp., Milwaukee, Wis.  
Whiting Corp., Harvey, Ill.**—(Full Circle Steam and Electric.)**Austin Machinery Corp., Muskegon, Mich.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The Lorain, Ohio.**—(Gasoline.)**Buckeye Traction Ditcher Co., Findlay, O.  
Harnischfeger Corp., Milwaukee, Wis.  
Industrial Brownhoist Corp., Cleveland, O.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The Lorain, Ohio.**—(Jib.)**

Whiting Corp., Harvey, Ill.

**—(Locomotive.)**Bucyrus-Erie Co., Erie, Penna.  
Industrial Brownhoist Corp., Cleveland, O.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The Lorain, Ohio.**—(Material Handling.)**Bay City Shovel, Inc., Bay City, Mich.  
Industrial Brownhoist Corp., Cleveland, O.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., The Lorain, Ohio.  
Universal Crane Co., Lorain, Ohio.**—(Traveling, Hand Power.)**Harrington Co., The Philadelphia, Pa.  
Whiting Corp., Harvey, Ill.**CRAWLERS (Tractor.)**Biddell Co., W. A., Bucyrus, Ohio.  
Truscon Co., Milwaukee, Wis.**CRESOTED MATERIALS.**Amer. Cresote Wks., Inc., New Orleans.  
Delaware Wood Preserving Co., Phila.  
Savannah Croosoting Co., Savannah, Ga.**CRESOTED TIMBER.**Ayer & Lord Tie Co., Chicago, Ill.  
Brown Wood Preserving Co., Louisville, Ky.**CRESOTE OIL.**Amer. Cresote Wks., Inc., New Orleans.  
Ayer & Lord Tie Co., Inc., Chicago.**CRESOTING (Wood Materials.)**Amer. Cresote Wks., Inc., New Orleans.  
Amer. Cresoting Co., Inc., Louisville, Ky.  
Brown Wood Preserving Co., Louisville, Ky.  
Carolina Wood Preserving Co., Charleston, S. C.  
Delaware Wood Preserving Co., Phila.  
Eppinger & Russell Co., New York, N. Y.  
Gulf States Creos. Co., Hattiesburg, Miss.  
Savannah Croosoting Co., Savannah, Ga.  
Taylor-Colquitt Co., Spartanburg, S. C.  
Wales Wood-Preserving Co., Norfolk, Va.**CROSS-ARMS (Cresoted.)**Amer. Cresote Wks., Inc., New Orleans.  
Amer. Cresoting Co., Inc., Louisville, Ky.  
Savannah Croosoting Co., Savannah, Ga.**—(Zinc Meta Arsenite Treated.)**

Curtin-Howe Corp., New York, N. Y.

**CROSS-TIES (Cresoted.)**Amer. Cresote Wks., Inc., New Orleans.  
Amer. Cresoting Co., Inc., Louisville, Ky.  
Ayer & Lord Tie Co., Inc., Chicago.

Carolina Wood Preserving Co., Charleston, S. C.

Eppinger &amp; Russell Co., New York, N. Y.

Savannah Croosoting Co., Inc., Savannah, Ga.

Taylor-Colquitt Co., Spartanburg, S. C.

—(Zinc Meta Arsenite Treated.)

Curtin-Howe Corp., New York, N. Y.

**CRUSHED STONE (Road Concrete and Ballast.)**American Limestone Co., Knoxville, Tenn.  
Boxley & Co., W. W., Roanoke, Va.**CRUSHERS (Coal and Coke.)**

Fuller Lehigh Co., Fullerton, Pa.

**—Rock.**

Universal Crusher Co., Cedar Rapids, Iowa.

**CRUSHING and Pulverizing Machinery.**Aills-Chalmers Mfg. Co., Milwaukee, Wis.  
Day Pulverizer Co., Knoxville, Tenn.  
Fuller Lehigh Co., Fullerton, Pa.  
McLennan-Stone Machine Co., Hollidaysburg, Pa.  
Raymond Bros. Impact Pulverizer Co., Chicago, Ill.  
Universal Crusher Co., Cedar Rapids, Iowa.  
W-K-M Co., Inc., Houston, Texas.**CULVERT PIPE (Cast Iron.)**Amer. Cast Iron Pipe Co., Birmingham, Ala.  
Cast Iron Pipe Research Assn., Chicago, Ill.  
U. S. Pipe & Foundry Co., Burlington, N. J.**—(Corrugated Metal.)**American Sheet & Tin Plate Co., Pittsburgh, Pa.  
Armco Culvert Mfrs. Assn., Middletown, O.  
Dixie Culvert & Metal Co., Atlanta, Ga.  
Dixie Culvert Mfg. Co., Little Rock, Ark.  
Louisiana Corr. Culvert Co., Baton Rouge, La.  
Tenn. Metal Culvert Co., Nashville, Tenn.  
Western Metal Mfg. Co., Houston, Texas.**CURB PROTECTORS (Steel Bars.)**

Truscon Steel Co., Youngstown, O.

**CUTTERS (Wire Rope.)**

Leschen &amp; Sons Rope Co., A., St. Louis.

**CYLINDERS (Compressed Air, Gas.)**Janney, Jr., Jos. A., Phila., Pa.  
National Tube Co., Pittsburgh, Pa.**DERRICKS and Derrick Fittings.**Clyde Iron Works Sales Co., Duluth, Minn.  
Lidgerwood Mfg. Co., Elizabeth, N. J.  
Haggen Derrick Co., Chicago, Ill.**—(Used.)**

Galer Equipment Corp., New York, N. Y.

**DESKS (School.)**

Andrews Co., A. H., Chicago, Ill.

**—(Steel Factory.)**

Angie Steel Stool Co., Plainwell, Mich.

**DITCHING MACHINERY.**Barber-Greene Co., Aurora, Ill.  
Bay City Shovel, Inc., Bay City, Mich.  
Buckeye Traction Ditcher Co., Findlay, O.  
Harnischfeger Corp., Milwaukee, Wis.  
Hayward Co., The, New York, N. Y.  
Industrial Brownhoist Corp., Cleveland, O.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Owen Bucket Co., The, Cleveland, O.**DOORS (Bronze.)**

Michaels Art Bronze Co., Covington, Ky.

**—(Fire.)**Marchant & Evans Co., Philadelphia, Pa.  
Richards-Wilcox Mfg. Co., Aurora, Ill.**—(Fireproof, Air Chamber.)**

Wilson Corp., The J. G., New York.

**—(Kalamine.)**

Moeschl-Edwards Corr. Co., Cincinnati.

**—(Rolling, Steel and Wood.)**Kinnear Mfg. Co., The, Columbus, Ohio.  
Mahan Co., A. C., Detroit, Mich.  
Moeschl-Edwards Corr. Co., Cincinnati.  
Wilson Corp., The J. G., New York.**—(Steel.)**

Detroit Steel Products Co., Detroit, Mich.

**—(Tubular Steel.)**

Bayley Co., Wm., Springfield, O.

**DRAFTSMEN'S SUPPLIES.**

Weber Co., Inc., F., Philadelphia, Pa.

**DRAGLINE EXCAVATORS.**Austin Machinery Corp., Muskegon, Mich.  
Bucyrus-Erie Co., Erie, Penna.Harnischfeger Corp., Milwaukee, Wis.  
Monaghan Mfg. Corp., Chicago, Ill.  
National Equipment Corp. (Keohring, Insley), Milwaukee, Wis.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Sauerman Bros., Chicago, Ill.  
Thew Shovel Co., The, Lorain, Ohio.  
Universal Power Shovel Co., Milwaukee, Wis.**DREDGES (Dipper, Elevator, Hydraulic.)**Bay City Shovel, Inc., Bay City, Mich.  
Bucyrus-Erie Co., Erie, Pa.  
Ellicott Machine Corp., Baltimore, Md.  
Morris Machine Wks., Baldwinville, N. Y.**DREDGING (River and Harbor Improvement.)**Arundel Corp., The, Baltimore, Md.  
Atlantic Gulf and Pacific Co., New York.**—Machinery.**American Steel Dredge Co., Fort Wayne, Ind.  
Ellicott Machine Corp., Baltimore, Md.  
Hayward Co., The, New York.**DRILLING CONTRACTORS.**Mott Core Drilling Co., Huntington, W. Va.  
Pennsylvania Drilling Co., Pittsburgh, Pa.  
Southern Drilling Co., Saltville, Va.  
Sprague & Henwood, Inc., Scranton, Pa.**DRILLS (Artesian Well.)**

Virginia Machinery &amp; Well Co., Inc., Richmond, Va.

**—(Electric.)**Chicago Pneumatic Tool Co., New York.  
Sullivan Mch. Co., Chicago.**—(Pneumatic.)**Chicago Pneumatic Tool Co., New York.  
Ingersoll-Rand Co., New York, N. Y.  
Sullivan Machinery Co., Chicago, Ill.**DRINKING FOUNTAINS.**Rundie-Spence Mfg. Co., Milwaukee, Wis.  
Taylor Co., Halsey W., Warren, Ohio.**DROP-FORGING MACHINERY.**

Bliss Co., E. W., Brooklyn, N. Y.

**DRYERS (Gravel and Sand.)**

Ripley Fdy. &amp; Mch. Co., Ripley, Ohio.

**DRY KILNS and Equipment.**

Moore Dry Kiln Co., Jacksonville, Fla.

**DRYING MACHINERY.**

American Process Co., New York, N. Y.

**DUMP TRUCK BODIES and HOISTS.**Easton Car & Construction Co., Easton, Pa.  
Lee Trailer & Body Co., Inc., Plymouth, Ind.**DUSTPROOFING (Concrete.)**

Sonnenborn Sons, Inc., L., New York.

**DYESTUFFS.**

Du Pont de Nemours &amp; Co., Inc., E. I., Wilmington, Del.

**DYNAMITE (Industrial and Agricultural.)**Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.  
Hercules Powder Co., Inc., Wilmington, Del.**ELECTRICAL Instruments and Supplies.**Adams Electric Co., Frank, St. Louis.  
General Electric Co., Schenectady, N. Y.  
Western Electric Co., New York City.**—Machinery (Generators, Motors, etc., New.)**Aills-Chalmers Mfg. Co., Milwaukee, Wis.  
Elliotte, Howard C., Miami, Fla.  
Fairbanks, Morse & Co., Chicago, Ill.  
General Electric Co., Schenectady, N. Y.  
Howell Electric Motors Co., Howell, Mich.  
Rockford Power Machy. Co., Rockford, Ill.  
Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.**—Machinery (Generators, Motors, etc., Used.)**Belyea Co., Inc., New York City.  
Delta Equipment Co., Philadelphia, Pa.  
Electric Service Co., Cincinnati, Ohio.  
Electrical Equip. Co., Raleigh, N. C.  
General Electric Co., Schenectady, N. Y.  
Gregory Electric Co., Chicago.  
Nashville Industrial Corp., Old Hickory, Tenn.  
Nussbaum & Co., V. M., Ft. Wayne, Ind.  
O'Brien Machinery Co., The, Phila., Pa.  
Randle Machinery Co., The, Cincinnati, O.  
Rockford Power Machy. Co., Rockford, Ill.  
Stewart Elec. Co., John A., Cincinnati.—Machinery Repairing (Motors, Generators, etc.)  
Electric Service Co., Cincinnati, Ohio.  
Gregory Electric Co., Chicago.**ELECTRIC LIGHTING.**

General Electric Vapor Lamp Co., Hoboken, N. J.

**ELECTRIC SHOVELS (See Shovels.)****ELEVATOR Cables.**

Leschen &amp; Sons Rope Co., A., St. Louis.

**—(Equalizers.)**

Evans Elevator Equalizer Co., Bedford, Ind.

**ELEVATORS (Electric.)**American Elevator & Machine Co., Inc., Louisville, Ky.  
Miller Co., St. Louis, Mo.**—(Hand and Belt Power.)**American Elevator & Machine Co., Inc., Louisville, Ky.  
Miller Co., St. Louis, Mo.**—(Hydraulic.)**

American Elevator &amp; Machine Co., Inc., Louisville, Ky.

**—(Portable.)**

O. K. Clutch &amp; Machy. Co., Columbia, Pa.

**ENGINEERS (Airports.)**

MacElwae &amp; Crandall, Inc., Cambridge, Mass.

Miller & Asso., Wendell P., Chicago, Ill.  
Shaw Co., Russell B., St. Louis, Mo.**—(Appraisal.)**Ballinger Co., Philadelphia, Pa.  
Batter & Kipp, Inc., Chicago, Ill.  
Fay, Spofford & Thorndike, Boston, Mass.  
Ford, Bacon & Davis, Inc., New York.  
Harrison, Wm. Henry, Washington, D. C.  
Lockwood Greene Engrs., Inc., New York City.**—(Civil.)**Atlantic Bridge Co., Greensboro, N. C.  
Billingsley, James W., New Orleans, La.  
Fay, Spofford & Thorndike, Boston, Mass.  
Freeland, Roberts & Co., Nashville, Tenn.  
Gardner & Howe, Memphis, Tenn.  
Greiner & Co., J. E., Baltimore, Md.  
Hardaway Contracting Co., Columbus, Ga.  
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.  
Howerton Engineering Co., Asheville, N. C.  
Steel & Leiby, Knoxville, Tenn.  
Turner, C. A. P., Minneapolis, Minn.  
Virginia Bridge & Iron Co., Roanoke, Va.  
Wheeler, Walter H., Minneapolis, Minn.**—(Chemical.)**

Barrow-Agee Laboratories, Memphis, Tenn.

Dow &amp; Smith, New York, N. Y.

Flood &amp; Co. Walter H., Chicago, Ill.

Picard Laboratories, Birmingham, Ala.

Pittsburgh Testing Laboratories, Pittsburgh, Pa.

**—(Civil.)**Airmap Corp. of Amer., Brooklyn, N. Y.  
Batter & Kipp, Inc., Chicago, Ill.  
Charlton & Davis, Ft. Lauderdale, Fla.  
Fuller & McClintock, New York, N. Y.  
Gardner & Howe, Memphis, Tenn.  
Greiner & Co., J. E., Baltimore, Md.  
Harrub Engr. Co., C. N., Nashville, Tenn.  
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.  
Hills Co. George B., Jacksonville, Fla.  
MacElwae & Crandall, Inc., Cambridge, Mass.**—(Consulting.)**Airmap Corp. of Amer., Brooklyn, N. Y.  
Barstow & Co., W. E., Reading, Pa.  
Biggs Engr. Co., W. E., Knoxville, Tenn.  
Charlton & Davis, Ft. Lauderdale, Fla.  
Converse & Co., J. B., Mobile, Ala.  
Engineering Service Corp., Houston, Tex.  
Harrison, Wm. Henry, Washington, D. C.  
Harris Engineering Co., Chicago.  
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.**—(Consulting.)**Airmap Corp. of Amer., Brooklyn, N. Y.  
Barstow & Co., W. E., Reading, Pa.  
Biggs Engr. Co., W. E., Knoxville, Tenn.  
Charlton & Davis, Ft. Lauderdale, Fla.  
Converse & Co., J. B., Mobile, Ala.  
Engineering Service Corp., Houston, Tex.  
Harrison, Wm. Henry, Washington, D. C.  
Harris Engineering Co., Chicago.  
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.**—(Consulting.)**Airmap Corp. of Amer., Brooklyn, N. Y.  
Barstow & Co., W. E., Reading, Pa.  
Biggs Engr. Co., W. E., Knoxville, Tenn.  
Charlton & Davis, Ft. Lauderdale, Fla.  
Converse & Co., J. B., Mobile, Ala.  
Engineering Service Corp., Houston, Tex.  
Harrison, Wm. Henry, Washington, D. C.  
Harris Engineering Co., Chicago.  
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.**—(Consulting.)**Airmap Corp. of Amer., Brooklyn, N. Y.  
Barstow & Co., W. E., Reading, Pa.  
Biggs Engr. Co., W. E., Knoxville, Tenn.  
Charlton & Davis, Ft. Lauderdale, Fla.  
Converse & Co., J. B., Mobile, Ala.  
Engineering Service Corp., Houston, Tex.  
Harrison, Wm. Henry, Washington, D. C.  
Harris Engineering Co., Chicago.  
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.**—(Consulting.)**Airmap Corp. of Amer., Brooklyn, N. Y.  
Barstow & Co., W. E., Reading, Pa.  
Biggs Engr. Co., W. E., Knoxville, Tenn.  
Charlton & Davis, Ft. Lauderdale, Fla.  
Converse & Co., J. B., Mobile, Ala.  
Engineering Service Corp., Houston, Tex.  
Harrison, Wm. Henry, Washington, D. C.  
Harris Engineering Co., Chicago.  
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.**—(Consulting.)**Airmap Corp. of Amer., Brooklyn, N. Y.  
Barstow & Co., W. E., Reading, Pa.  
Biggs Engr. Co., W. E., Knoxville, Tenn.  
Charlton & Davis, Ft. Lauderdale, Fla.  
Converse & Co., J. B., Mobile, Ala.  
Engineering Service Corp., Houston, Tex.  
Harrison, Wm. Henry, Washington, D. C.  
Harris Engineering Co., Chicago.  
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.**—(Consulting.)**Airmap Corp. of Amer., Brooklyn, N. Y.  
Barstow & Co., W. E., Reading, Pa.  
Biggs Engr. Co., W. E., Knoxville, Tenn.  
Charlton & Davis, Ft. Lauderdale, Fla.  
Converse & Co., J. B., Mobile, Ala.  
Engineering Service Corp., Houston, Tex.  
Harrison, Wm. Henry, Washington, D. C.  
Harris Engineering Co., Chicago.  
Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.

# CLYDE

## HOISTS - DERRICKS

### FAST - DEPENDABLE - EFFICIENT

All desirable qualities found in every Clyde hoist. Built of the finest materials, and with the best workmanship, these hoists give long and lasting service.

Below is shown the new West End High School of Birmingham, being built by the Smallman Construction Co. Two Clyde 45 horsepower, double drum gasoline hoists are used to handle materials.



You'll take PRIDE



In your CLYDE

## CLYDE IRON WORKS SALES CO.

DISTRIBUTORS FOR CLYDE IRON WORKS DULUTH, MINNESOTA

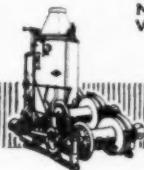
—BRANCHES—

NEW ORLEANS: 309 MAGAZINE ST.  
 PORTLAND, OREGON: 555 THURMAN ST.  
 SEATTLE: 3410 FIRST AVENUE SOUTH  
 CHICAGO: 11 SO. LA SALLE STREET

MEMPHIS: 69 UNION AVENUE  
 NEW YORK: 856 EAST 136TH STREET  
 VANCOUVER, BRITISH COLUMBIA  
 1325 STANDARD BANK BLDG.



TWO MARKS OF




GUARANTEED QUALITY





- (Dams.)  
Alpaugh & Sons, Chas. W., Manassas, Va.  
Battley & Kipp, Inc., Chicago, Ill.  
Byllesby Engineering and Management Corp., Chicago, Ill.  
Floyd & Lochridge, Dallas, Texas.  
Gardner & Howe, Memphis, Tenn.  
Hardaway Contracting Co., Columbus, Ga.  
Harza Engineering Co., Chicago.  
Hedrick Inc., Ira G., Hot Springs Nat'l. Park, Ark.  
Lee, William S., Charlotte, N. C.  
Main, Inc., Chas. T., Boston, Mass.  
Sirrins & Co., J. E., Greenville, S. C.  
Tucker & Laxton, Charlotte, N. C.  
Wheeler, Walter H., Minneapolis, Minn.  
White Engr. Corp., J. G., New York.
- (Drainage and Irrigation.)  
Floyd & Lochridge, Dallas, Texas.  
Ford, Bacon & Davis, Inc., New York.  
Fuller & McClintock, New York, N. Y.  
Hills Co., George B., Jacksonville, Fla.  
Ludlow Engineers, Winston-Salem, N. C.
- (Efficiency.)  
Barstow & Co., W. S., Reading, Pa.  
Ernst & Ernst, New York, N. Y.
- (Electrical.)  
Battley & Kipp, Inc., Chicago, Ill.  
Engineering Service Corp., Houston, Texas.  
Hoosier Engineering Co., Chicago, Ill.  
Lee, William S., Charlotte, N. C.  
Lockwood Greene Engrs., Inc., New York City.  
Main, Inc., Chas. T., Boston, Mass.  
Mullergren, Arthur L., Kansas City, Mo.  
Sanderson & Porter, New York, N. Y.  
Stone & Webster, Inc., Boston, Mass.  
Tucker & Laxton, Charlotte, N. C.  
Webb Electric Co., Anderson, S. C.  
White Co., Gilbert C., Durham, N. C.  
Wiley & Wilson, Lynchburg, Va.
- (Electric-Light and Power Plants.)  
Battley & Kipp, Inc., Chicago, Ill.  
Biggs Eng. Co., W. E., Knoxville, Tenn.  
Byllesby Engineering and Management Corp., Chicago, Ill.  
Ford, Bacon & Davis, Inc., New York.  
Lee, William S., Charlotte, N. C.  
Main, Inc., Chas. T., Boston, Mass.  
Mullergren, Arthur L., Kansas City, Mo.  
Sanderson & Porter, New York, N. Y.  
Scotfield Engineering Co., Phila., Pa.  
Stone & Webster, Inc., Boston, Mass.  
Tucker & Laxton, Charlotte, N. C.  
White Engineering Corp., J. G., New York.  
White Co., Gilbert C., Durham, N. C.
- (Flood Control.)  
Floyd & Lochridge, Dallas, Texas.  
Harza Engineering Co., Chicago.
- (Forest.)  
Lacey & Co., Jas. D., New York, N. Y.
- (Gas.)  
Byllesby Engineering and Management Corp., Chicago, Ill.  
Ford, Bacon & Davis, Inc., New York.  
Harrison, William Henry, Washington, D. C.
- (Geological.)  
De Kaib, Courtenay, New York City.  
Froehling & Robertson, Richmond, Va.  
Harrison, William Henry, Washington, D. C.  
Wadleigh & Bailey, Washington, D. C.
- (Harbor Improvements.)  
Billingsley, James W., New Orleans, La.  
Engineering Service Corp., Houston, Texas.  
Fay, Spofford & Thorndike, Boston, Mass.
- (Heating.)  
Battley & Kipp, Inc., Chicago, Ill.  
Biggs Eng. Co., W. E., Knoxville, Tenn.  
Wiley & Wilson, Lynchburg, Va.
- (Hydraulic.)  
Alpaugh & Sons, Chas. W., Manassas, Va.  
Floyd & Lochridge, Dallas, Texas.  
Fuller & McClintock, New York, N. Y.  
Harza Engineering Co., Chicago.  
Main, Inc., Chas. T., Boston, Mass.
- (Hydro-electric.)  
Alpaugh & Sons, Chas. W., Manassas, Va.  
Battley & Kipp, Inc., Chicago, Ill.  
Byllesby Engineering and Management Corp., Chicago, Ill.  
Harza Engineering Co., Chicago.  
Lee, William S., Charlotte, N. C.  
Ludlow Engineers, Winston-Salem, N. C.  
Main, Inc., Chas. T., Boston, Mass.  
Mees & Mees, Charlotte, N. C.  
Piatt, William M., Durham, N. C.  
Sanderson & Porter, New York, N. Y.  
Scotfield Engineering Co., Phila., Pa.  
Sirrins & Co., J. E., Greenville, S. C.  
Tucker & Laxton, Charlotte, N. C.  
White Engineering Corp., J. G., New York.
- (Ice and Refrigerating.)  
Engineering Service Corp., Houston, Texas.
- (Industrial Plants.)  
Ballinger Co., Philadelphia, Pa.  
Barstow & Co., W. S., Reading, Pa.  
Battley & Kipp, Inc., Chicago, Ill.  
Biggs Eng. Co., W. E., Knoxville, Tenn.  
Billingsley, James W., New Orleans, La.  
Charleston Constructors, Inc., Charleston, S. C.  
Consoer, Older & Quinlan, Inc., Chicago.  
Converse & Co., J. B., Mobile, Ala.  
Fay, Spofford & Thorndike, Boston, Mass.  
Gardner & Howe, Memphis, Tenn.  
Greiner & Co., J. E., Baltimore, Md.  
Harty, Charles H., New York City.
- Hills Co., George B., Jacksonville, Fla.  
Lockwood Greene Engrs., Inc., New York City.  
MacElwee & Crandall, Inc., Cambridge, Mass.  
Main, Inc., Chas. T., Boston, Mass.  
Mees & Mees, Charlotte, N. C.  
Morgan Constr. Co., Worcester, Mass.  
Mullergren, Arthur L., Kansas City, Mo.  
Preacher & Co., Inc., G. Lloyd, Atlanta.  
Sanderson & Porter, New York, N. Y.  
Scotfield Engineering Co., Phila., Pa.  
Simmons, Inc. & Associates, B. Stanley, Washington, D. C.  
Sirrins & Co., J. E., Greenville, S. C.  
Smith, Elroy G., Augusta, Ga.  
Stone & Webster, Inc., Boston, Mass.  
Turner, C. A. P., Minneapolis, Minn.  
Widmer Engineering Co., St. Louis, Mo.  
Williamson, Lee H., Charlottesville, Va.
- (Industrial Survey.)  
Converse & Co., J. B., Mobile, Ala.  
Harty, Charles H., New York City.  
Lockwood Greene Engrs., Inc., New York City.  
Wadleigh & Bailey, Washington, D. C.
- (Inspection and Tests.)  
Barrow-Agee Laboratories, Memphis, Tenn.  
Conard & Busby, Burlington, N. J.  
Dow & Smith, New York, N. Y.  
Flood & Co., Walter H., Chicago, Ill.  
Froehling & Robertson, Inc., Richmond, Va.  
Hunt Co., Robert W., Chicago, Ill.  
Picard Laboratories, Birmingham, Ala.  
Pittsburgh Testing Laboratories, Pittsburgh, Pa.  
Southwestern Laboratories, Ft. Worth, Texas.
- (Landscapes.)  
Draper, E. S., Charlotte, N. C.
- (Lighting.)  
Battley & Kipp, Inc., Chicago, Ill.  
Byllesby Engineering and Management Corp., Chicago, Ill.  
Ford, Bacon & Davis, Inc., New York.  
General Electric Vapor Lamp Co., Hoboken, N. J.  
Wiley & Wilson, Lynchburg, Va.
- (Mechanical.)  
Battley & Kipp, Inc., Chicago, Ill.  
Charlton & Davis, Ft. Lauderdale, Fla.  
Engineering Service Corp., Houston, Texas.  
Invicta Engineering Co., Birmingham, Ala.  
Lee, William S., Charlotte, N. C.  
Lockwood Greene Engrs., Inc., New York City.  
Main, Inc., Chas. T., Boston, Mass.  
Mees & Mees, Charlotte, N. C.  
Meigs, Bassett & Slaughter, Phila., Pa.  
Sanderson & Porter, New York, N. Y.  
Wiley & Wilson, Lynchburg, Va.
- (Metal Protection.)  
Dixie Electro Plating Co., Houston, Tex.
- (Mining. See Engineers, Geological.)
- (Municipal.)  
Billingsley, James W., New Orleans, La.  
Consoer, Older & Quinlan, Inc., Chicago.  
Dow & Smith, New York, N. Y.  
Harza Engr. Co., C. N., Nashville, Tenn.  
Hills Co., George B., Jacksonville, Fla.  
Howerton Engineering Co., Asheville, N. C.  
Knowles, Inc., Morris, Pittsburgh, Pa.  
Ludlow Engineers, Winston-Salem, N. C.  
McCrary Co., The J. B., Atlanta, Ga.  
Spoon & Lewis, Greensboro, N. C.  
White Co., Gilbert C., Durham, N. C.
- (Paving and Roads.)  
Billingsley, James W., New Orleans, La.  
Dow & Smith, New York, N. Y.  
Freeland, Roberts & Co., Nashville, Tenn.  
Harza Engr. Co., C. N., Nashville, Tenn.  
Howerton Engineering Co., Asheville, N. C.  
Ludlow Engineers, Winston-Salem, N. C.  
Piatt, William M., Durham, N. C.  
Spoon & Lewis, Greensboro, N. C.  
White Co., Gilbert C., Durham, N. C.
- (Production.)  
Scotfield Engr. Co., Phila., Pa.
- (Public Service Properties.)  
Byllesby Engineering and Management Corp., Chicago, Ill.  
Ford, Bacon & Davis, Inc., New York.  
Fuller & McClintock, New York, N. Y.  
Harza Engineering Co., Chicago, Ill.  
Main, Inc., Chas. T., Boston, Mass.  
Sanderson & Porter, New York, N. Y.  
Scotfield Engineering Co., Phila., Pa.  
Stone & Webster, Inc., Boston, Mass.  
White Engineering Corp., J. G., New York.
- (Railroad.)  
Mees & Mees, Charlotte, N. C.
- (Reinforced Concrete Bridges, Buildings, etc.)  
Atlantic Bridge Co., Greensboro, N. C.  
Ballinger Co., Philadelphia, Pa.  
Battley & Kipp, Inc., Chicago, Ill.  
Fay, Spofford & Thorndike, Boston, Mass.  
Freeland, Roberts & Co., Nashville, Tenn.  
Gardner & Howe, Memphis, Tenn.  
Greiner & Co., J. E., Baltimore, Md.  
Lockwood Greene Engrs., Inc., New York City.  
Main, Inc., Chas. T., Boston, Mass.  
Steel & Leiby, Knoxville, Tenn.  
Tucker & Laxton, Charlotte, N. C.  
Turner, C. A. P., Minneapolis, Minn.  
Wheeler, Walter H., Minneapolis, Minn.
- (Research and Development.)  
Invicta Engineering Co., Birmingham, Ala.
- (Sanitary.)  
Harza Engineering Co., Chicago.
- (Sewage Disposal Plants.)  
Fuller & McClintock, New York, N. Y.  
Kudlow Engineers, Winston-Salem, N. C.  
McCrary Co., The J. B., Atlanta, Ga.  
Piatt, William M., Durham, N. C.  
Wiedeman and Singleton, Inc., Atlanta.
- (Sewerage and Waterworks.)  
Conard & Busby, Burlington, N. J.  
Consoer, Older & Quinlan, Inc., Chicago.  
Ford, Bacon & Davis, Inc., New York.  
Fuller & McClintock, New York, N. Y.  
Harza Engineering Co., Chicago, Ill.  
Harza Engr. Co., C. N., Nashville, Tenn.  
Hills Co., George B., Jacksonville, Fla.  
Howerton Engineering Co., Asheville, N. C.  
Knowles, Inc., Morris, Pittsburgh, Pa.  
Ludlow Engineers, Winston-Salem, N. C.  
Mees & Mees, Charlotte, N. C.  
Piatt, William M., Durham, N. C.  
Sanderson & Porter, New York, N. Y.  
Spoon & Lewis, Greensboro, N. C.  
Tucker & Laxton, Charlotte, N. C.  
White Co., Gilbert C., Durham, N. C.  
White Engineering Corp., J. G., New York.
- Wiedeman & Singleton, Inc., Atlanta, Ga.  
Williamson, Lee H., Charlottesville, Va.
- (Structural.)  
Freeland, Roberts & Co., Nashville, Tenn.  
Hedrick, Inc., Ira G., Hot Springs Nat'l. Park, Ark.  
Hills Company, Geo. B., Jacksonville, Fla.  
Lockwood Greene Engrs., Inc., New York City.  
Simmons, Inc. & Associates, B. Stanley, Washington, D. C.  
Turner, C. A. P., Minneapolis, Minn.  
Virginia Bridge & Iron Co., Roanoke, Va.
- (Textile Mills.)  
Ballinger Co., Philadelphia, Pa.  
Lockwood Greene Engrs., Inc., New York City.
- (Transmission Lines.)  
Hoosier Engineering Co., Chicago, Ill.
- (Ventilating and Heating.)  
Biggs Eng. Co., W. E., Knoxville, Tenn.  
Wiley & Wilson, Lynchburg, Va.
- (Water Supply.)  
Floyd & Lochridge, Dallas, Texas.
- (Dragline. See Dragline Excavators.)
- (Trench.)  
Barber-Greene Co., Aurora, Ill.  
Bay City Shovels, Inc., Bay City, Mich.  
Buckeye Traction Ditcher Co., Findlay, O.  
Bucyrus-Erie Co., Erie, Penna.  
Harnischfeger Corp., Milwaukee, Wis.  
Hayward Co., The, New York, N. Y.  
Monaghan Mfg. Corp., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Universal Power Shovel Co., Milwaukee, Wis.
- EXHAUST FANS (See Blowers and Exhaust Fans.)
- Systems (See Blowers and Exhaust Fans.)
- EXPANSION Joints (Road and Street.)  
Serrisied Premoulded Products, Inc., Chicago, Ill.
- EXPLOSIVES.  
Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.  
Hercules Powder Co., Inc., Wilmington, Del.
- FACTORY Management Systems.  
Ernst & Ernst, New York, N. Y.
- FANS, Exhaust (See Blowers and Exhaust Fans.)
- FEED-WATER HEATERS and Purifiers.  
American Water Softener Co., Phila., Pa.
- FENCE POSTS (Crossed.)  
Ayer & Lord Tie Co., Chicago, Ill.
- FENCING Entrance Gates (Iron, Steel and Wire.)  
American Steel and Wire Co., Balto., Md.  
Anchor Post Fence Co., Baltimore, Md.  
Cyclone Fence Co., Waukegan, Ill.  
Page Fence Association, Chicago, Ill.  
Stewart Iron Works Co., Cincinnati, O.
- (Field and Industrial, Wire Woven.)  
American Steel and Wire Co., Balto., Md.  
Anchor Post Fence Co., Baltimore, Md.  
Cyclone Fence Co., Waukegan, Ill.  
Gulf States Steel Co., Birmingham, Ala.  
Page Fence Association, Chicago, Ill.  
Stewart Iron Works Co., Cincinnati, O.
- FERTILIZER MACHINERY.  
Raymond Bros., Impact Pulv. Co., Chicago.
- FILTER (For Domestic and Industrial Purposes.)  
American Water Softener Co., Phila., Pa.  
International Filter Co., Chicago, Ill.  
Rees, S. P., Atlanta.  
Roberts Filter Mfg. Co., Darby (Phila.), Pa.  
Scaife & Sons Co., Wm. B., Oakmont, Pa.
- FINANCING.  
Akers, William, Atlanta, Ga.  
Electric Bond & Share Co., New York.  
Garraway & Co., S. G., Chicago.  
Gay & Co., W. O., New York, N. Y.  
Marr & Co., Birmingham, Ala.
- FIRE CLAY.  
Alabama Clay Products Co., Birmingham.  
Cambria Clay Products Co., Blackfork, O.
- FIRE EXTINGUISHERS.  
Myers & Bro. Co., The F. E., Ashland, O.
- FIREPROOF Building Material.  
Bannon Pipe Co., Louisville, Ky.  
Robertson Co., H. H., Pittsburgh.
- Doors and Shutters.  
Kinnean Mfg. Co., The, Columbus, Ohio.  
Mahon Co., R. C., Detroit, Mich.  
Moesch-Ewards Corp., Co., Cincinnati, O.  
Richards-Wilcox Mfg. Co., Aurora, Ill.  
Wilson Corp., The J. G., New York City.
- FITTINGS (Wire Rope.)  
Leschen & Sons Rope Co., A., St. Louis.
- FLANGES (Iron and Steel.)  
Amer. Cast Iron Pipe Co., Birmingham.  
Dart Mfg. Co., E. M., Providence, R. I.
- EXCAVATING MACHINERY.  
Bay City Shovels, Inc., Bay City, Mich.  
Buckeye Traction Ditcher Co., Findlay, O.  
Bucyrus-Erie Co., Erie, Penna.  
Clyde Iron Works Sales Co., Duluth, Minn.  
Harnischfeger Corp., Milwaukee, Wis.  
Hayward Co., The, New York, N. Y.  
Industrial Brownhoist Corp., Cleveland.  
Monaghan Mfg. Corp., Chicago, Ill.  
National Equipment Corp. (Kochring, Insley, Parsons), Milwaukee, Wis.  
Northwest Engineering Co., Chicago, Ill.  
Owen Bucket Co., The, Cleveland, Ohio.  
Thew Shovel Co., The, Lorain, Ohio.  
Universal Power Shovel Co., Milwaukee, Wis.
- EXCAVATORS (Clamshell and Orange Peel.)  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thew Shovel Co., Lorain, Ohio.



**Wilson**  
**SECTION FOLD**  
(Reg. U. S. Pat. Off.)  
**PARTITIONS**

*Make the "Gym" do Double Duty*  
**O**NE LARGE room into many at few minutes notice. Fold back out of way when not in use. Doors and Hardware, made complete at our own factory. Five year guarantee with each installation.

Write for Catalog No. 8  
**THE J. G. WILSON CORPORATION**  
11 East 38th St., New York City  
Offices in all Principal Cities  
Over 50 years in business

**THE QUALITY UNION**

The Dart is the Quality Union, and quality is always cheapest.

The Dart is made of Malleable Iron, with extra heavy pipe ends and with double seated ball joint formed of bronze rings.

**IN DART UNION THERE IS DOUBLE STRENGTH**



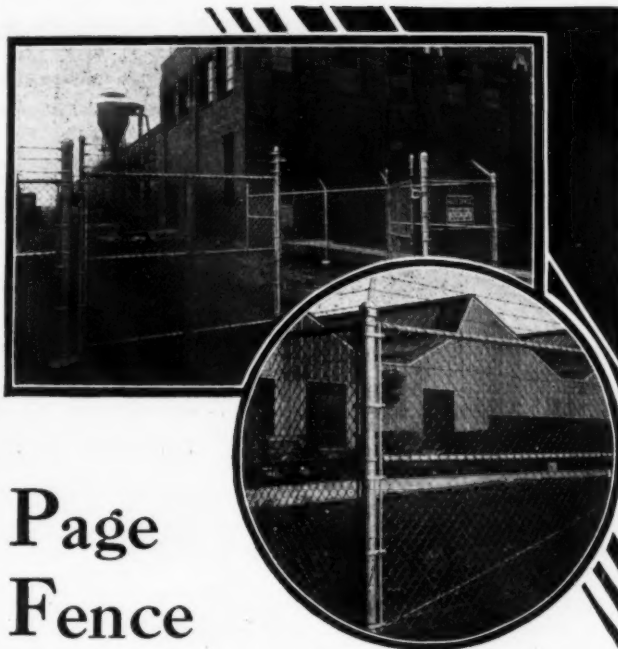
**E. M. DART MFG. CO.**  
PROVIDENCE, R. I.

The Fairbanks Company, Sales Agent  
Dart Union Co., Ltd., Toronto, Canada.

**ALLIS-CHALMERS MFG. CO.**  
MILWAUKEE, WIS., U. S. A.  
DESIGNERS AND BUILDERS OF

Steam Turbines, Electrical Machinery, Steam, Gas and Oil Engines, Centrifugal Pumps, Crushing & Cement Machinery, Etc.

**YOUNG & SELDEN COMPANY**  
MANUFACTURING  
**Bank and Commercial Stationers**  
BALTIMORE, MD.



## Page Fence protects America's Industries . .

**T**HE lasting qualities of Page Fence make it the lifetime fence of real protection—safeguarding industrial property at a cost of only a few dollars per year of service.

Page Fence is made in many different styles and heights and is the only fence available of durable Armco Ingot Iron, the highest type of rust-resistant iron known. For the heavier fence constructions, where more than ordinary abuse is involved, Page-H Section Line Posts are recommended.

Page also manufactures a complete line of Ornamental Wrought Iron (not steel) Fences and Gates. Special literature on request.

64 Service Plants erect Page Fence everywhere so that personalized individual service may be given. These organizations have engineers thoroughly experienced in developing fence layouts—estimating your requirements—helping you choose the type best suited for your needs. Send for special literature and for name of company nearest you. This involves no obligation. Address Page Fence Association, 520 North Michigan Avenue, Dept. A86, Chicago, Ill.

*America's first*  
—since—  
**PAGE**  
*wire fence*  
1883



*nation-wide service through 64 service plants*  
**FENCE**

CHAIN LINK OR ORNAMENTAL WROUGHT IRON



National Cast Iron Pipe Co., Birmingham, Ala.  
Taylor Forge & Pipe Wks., Chicago, Ill.  
U. S. Pipe & Foundry Co., Burlington, N. J.  
Vest Mch. Co., Henry, Louisville, Ky.  
—and Flanged Fittings.  
Grinnell Co., Inc., Providence, R. I.

**FLOOR. (Asphalt Plank.)**  
Serviced Premoulded Products, Inc., Chicago, Ill.

—(Cork Composition.)  
Congoleum-Nairn Inc., Kearny, N. J.

—(Hardwood, Maple, Oak.)  
Kirby Lumber Co., Houston, Tex.  
Nashville Hardwood Flooring Co., Nashville, Tenn.

—(Linoleum).  
Congoleum-Nairn Inc., Kearny, N. J.

—(Northern Hard Maple.)  
Kelt Hardwood Co., Oconto, Wis.

—(Open Steel.)  
Blaw-Knox Co., Pittsburgh, Pa.  
Irving Iron Works Co., Long Is. City, N. Y.  
Kerlow Steel Flooring Co., Jersey City, N. J.

—Covering.  
Congoleum-Nairn Inc., Kearny, N. J.

—Hardener (Concrete.)  
Sonneborn Sons, Inc., L. New York.  
Stenhard Co., Phila., Pa.

—Plates and Stair Treads.  
American Pressed Steel Co., Phila., Pa.  
Central Iron & Steel Co., Harrisburg, Pa.  
Harrison & Son, Inc., Joe. T., St. Louis and New York.

—Steel (For Concrete Culverts, Roads, Streets.)  
Blaw-Knox Co., Pittsburgh, Pa.

—Wax.  
Congoleum-Nairn Inc., Kearny, N. J.

—(Wood) Preservative.  
Stenhard Co., Phila., Pa.

**FLUSH-TANK SIPHONS.**  
Pacific Flush-Tank Co., New York, N. Y.

**FLYER PRESSERS.**  
Southern Spindle & Flyer Co., Charlotte, N. C.

**FLYERS.**  
Southern Spindle & Flyer Co., Charlotte, N. C.

**FORGINGS (Drop.)**  
Vest Mch. Co., Henry, Louisville, Ky.

**FORMS, Steel (For Concrete, Culverts, Roads, Streets, Curb-Sidewalks, Tiles.)**  
Blaw-Knox Co., Pittsburgh, Pa.

**FOUNDATION MASONRY.**  
Calligan Co., A. H., Richmond, Va.

**FOUNDRIES and Machine Shops.**  
Deemer Steel Casting Co., New Castle, Del.  
General Machine Works, York, Pa.  
Glamorgan Pipe & Foundry Co., Lymington, Va.  
Goldens' Fdry. & Mch. Co., Columbus, Ga.  
Lombard Iron Works & Supply Co., Augusta, Ga.  
Worcester Foundry Co., Chattanooga, Tenn.  
Mountain States Steel Foundries Parkersburg, W. Va.

**FOUNDRY Equipment and Supplies.**  
Chain Belt Co., Milwaukee, Wis.  
Will & Griffith Co., The Cincinnati, O.  
Whiting Corp., Harvey, Ill.  
—Facing (Tair and Soapstone).  
Hill & Griffith Co., The Cincinnati, O.

**FUMIGATORS (Fruit, Nuts, Nursery Stock, etc.)**  
Union Tank & Pipe Co., Los Angeles, Cal.

**FURNACES (Industrial.)**  
Combustion Engr., Corp., New York City.  
—(Water-Cooled.)  
Combustion Engr. Corp., New York City.  
Fuller Lehigh Co., Fullerton, Pa.

**GALVANIZED Products.**  
Birmingham Galvanizing Co., Birmingham, Ala.  
Cattle & Bros., Jos. P., Philadelphia, Pa.  
—Steel and Iron.  
American Rolling Mill Co., Middletown, O.  
American Sheet & Tin Plate Co., Pittsburgh, Pa.

Granite City Steel Co., Granite City, Ill.  
Republic Steel Corp., Youngstown, Ohio.

**GALVANIZING (Cadmium Plating.)**  
Birmingham Galvanizing Co., Birmingham, Ala.

—(Hot Dip.)  
Bessemer Galvanizing Works, Birmingham, Ala.  
Birmingham Galvanizing Co., Birmingham, Ala.  
Cattle & Bros., Jos. P., Philadelphia, Pa.  
Newport News Shipbuilding & Drydock Co., Newport News, Va.

**GARAGES (Metal.)**  
Maryland Metal Building Co., Balto., Md.

**GAS HOLDERS.**  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Works, Atlanta, Ga.

—Producers.  
Gas-O-Flame Stove Works, Port Deposit, Md.  
Morgan Construction Co., Worcester, Mass.  
Wood & Co., R. D., Philadelphia, Pa.

**GASOLINE and KEROSENE.**  
Gulf Refining Co., Pittsburgh, Pa.

**GASOLINE SHOVELS (See Shovels.)**

**GATES (Automatic Drainage.)**  
Armco Culvert Mfr. Assn., Middletown, O.  
Dixie Culvert & Metal Co., Atlanta, Ga.  
Dixie Culvert Mfg. Co., Little Rock, Ark.  
Louisiana Corr. Culvert Co., Baton Rouge, La.  
Tenn. Metal Culvert Co., Nashville, Tenn.  
Western Metal Mfg. Co., Houston, Texas.

**GAUGE GLASSES.**  
Jenkins Bros., New York, N. Y.

**GEARS.**  
DeLaval Steam Turbine Co., Trenton, N. J.  
Earle Gear & Machine Co., Phila., Pa.  
General Electric Co., Schenectady, N. Y.

—(Worm Reduction.)  
DeLaval Steam Turbine Co., Trenton, N. J.

**GENERATORS, MOTORS (New.)**  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
General Electric Co., Schenectady, N. Y.  
Howell Electric Motors Co., Howell, Mich.  
Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

—(Used.)  
Belyea Co., Inc., New York City.  
Electrical Equip. Co., Raleigh, N. C.  
Gregory Electric Co., Chicago.  
Nashville Ind. Corp., Old Hickory, Tenn.  
Nussbaum & Co., V. M., Ft. Wayne, Ind.  
O'Brien Machinery Co., Phila., Pa.  
Randle Machinery Co., The Cincinnati, O.  
Stewart Elec. Co., John A., Cincinnati.

**GEOLOGISTS. (See Engineers, Geological.)**

**GLASS (Art.)**  
Hinswanger & Co., Memphis, Tenn.  
Hires Turner Glass Co., Philadelphia, Pa.

—(Plate.)  
Hinswanger & Co., Inc., Memphis, Tenn.  
Blue Ridge Glass Corp., Kingsport, Tenn.  
Hires Turner Glass Co., Philadelphia, Pa.

—(Window.)  
Blue Ridge Glass Corp., Kingsport, Tenn.  
Hires Turner Glass Co., Philadelphia, Pa.

—(Wire.)  
Blue Ridge Glass Corp., Kingsport, Tenn.  
Hires Turner Glass Co., Phila., Pa.

**GRADERS (Elevating.)**  
Adams Co., J. D., Indianapolis, Ind.  
Caterpillar Tractor Co., San Leandro, Calif.

—(Lensing Wheel Road.)  
Adams Co., J. D., Indianapolis, Ind.

—(One Man Motor.)  
Adams Co., J. D., Indianapolis, Ind.  
Riddell Co., W. A., Bucyrus, Ohio.

**GRAPHITE.**  
Dixon Crucible Co., Jos., Jersey City, N. J.

**GRATES and Grate Bars.**  
Schofield's Sons Co., J. S., Macon, Ga.  
Vest Machine Co., Henry, Louisville, Ky.

**GRATING (Area, Flooring, Sidewalk.)**  
Bates Steel Corp., Walter, Gray, Ind.  
Blaw-Knox Co., Pittsburgh, Pa.

Hendrick Mfg. Co., Carbondale, Pa.  
Irving Iron Works, Long Is. City, N. Y.  
Kerlow Steel Flooring Co., Jersey City, N. J.

**GRAVEL (Roofing and Road.)**  
American Limestone Co., Knoxville, Tenn.  
Arundel Corp., The, Baltimore, Md.  
Boxley & Co., W. W., Roanoke, Va.  
Friend & Co., Inc., Petersburg, Va.

**GREASE CUPS.**  
Lunkenheimer Co., The, Cincinnati, O.

**GRILLES (Brass, Bronze, Steel, etc.)**  
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.

**GRINDERS (Cylinder.)**  
Hutto Engineering Co., Detroit, Mich.

—(Electric.)  
Chicago Pneumatic Tool Co., New York.

—(Gypsum, Limestone, etc.)  
Raymond Bros. Impact Pulv. Co., Chicago.

**GRINDING MACHINERY (Flexible Shaft.)**  
Hutto Engineering Co., Detroit, Mich.

Strand & Co., N. A., Chicago, Ill.

—Wheels.  
Carborundum Co., Niagara Falls, N. Y.

**GUARD RAIL (Road.)**  
National Traffic Guard Co., Atlanta.

**GUNITE CONSTRUCTION.**  
Cement-Gun Co., Inc., Allentown, Pa.  
Cement Gun Construction Co., Chicago.  
Gunite Cone. & Constr. Co., Kansas City.  
Gunite Constr. Co., New York City.  
Rust Engineering Co., Birmingham, Ala.

**GUNPOWDER.**  
Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.  
Hercules Powder Co., Inc., Wilmington, Del.

**GUNS (Hydraulic.)**  
Georgia Iron Works, Augusta, Ga.

**HANGARS (Airplane.)**  
Blaw-Knox Co., Pittsburgh, Pa.  
Braden Steel Corp., Tulsa, Okla.  
Ingalls Iron Works, Birmingham, Ala.  
Maryland Metal Bldg. Co., Balto., Md.

**HANGERS (Door, All Kinds.)**  
Richards-Wilcox Mfg. Co., Aurora, Ill.

—(Line Shaft.)  
American Pulley Co., Philadelphia, Pa.  
Wood's Sons Co., T. H., Chambersburg, Pa.

**HARBOR IMPROVEMENTS.**  
Arundel Corp., Baltimore, Md.  
Atlantic Gulf & Pacific Co., New York.

**HARDWARE (Door.)**  
Richards-Wilcox Mfg. Co., Aurora, Ill.

**HEATERS (Asphalt.)**  
Bonhorst Co., Jos., Cincinnati, O.

**HEATING Apparatus (Engineers and Contractors.)**  
Grinnell Co., Inc., Providence, R. I.  
Poe Piping & Heating Co., Greenville, S. C.  
Skinner Bros. Mfg. Co., St. Louis, Mo.

—Systems.  
Clarage Fan Co., Kalamazoo, Mich.  
Skinner Bros. Mfg. Co., St. Louis, Mo.

**HOISTING MACHINERY.**  
Clyde Iron Works Sales Co., Duluth, Minn.  
Lidgerwood Mfg. Co., Elizabeth, N. J.

**HOISTS (Air Portable.)**  
Ingersoll-Rand Co., New York, N. Y.  
Sullivan Machinery Co., Chicago, Ill.

—(Chain.)  
Harrington Co., The, Philadelphia, Pa.

—(Electric.)  
Clyde Iron Works Sales Co., Duluth, Minn.

Harnischfeger Corp., Milwaukee, Wis.  
Milwaukee Elec. Crane & Hoist Corp., Milwaukee, Wis.  
Mundy Hoisting Engine Co., J. S., Newark, N. J.

Novo Engine Co., Lansing, Mich.  
O. K. Clutch & Mch. Co., Columbia, Pa.

Street Bros. Mch. Wks., Chattanooga, Tenn.

—(Gasoline.)  
Clyde Iron Works Sales Co., Duluth, Minn.

Dake Engine Co., Grand Haven, Mich.  
Mundy Hoisting Engine Co., J. S., Newark, N. J.

National Equipment Corp. (C. H. & E. Division), Milwaukee, Wis.  
Novo Engine Co., Lansing, Mich.  
O. K. Clutch & Mch. Co., Columbia, Pa.

Street Bros. Mch. Wks., Chattanooga, Tenn.

—(Hand Power.)  
O. K. Clutch & Mch. Co., Columbia, Pa.

—(Steam.)  
Clyde Iron Works Sales Co., Duluth, Minn.  
Dake Engine Co., Grand Haven, Mich.  
Mundy Hoisting Engine Co., J. S., Newark, N. J.

Street Bros. Mch. Wks., Chattanooga, Tenn.

**HOOPS, Bands, etc. (Galvanized.)**  
Connors Steel Co., Birmingham, Ala.

**HOPPERS (Aggregate, Measuring and Weighing.)**  
Blaw-Knox Co., Pittsburgh, Pa.

**HOSE (Rubber.)**  
Republic Rubber Co., Youngstown, Ohio.

**HOTELS.**  
Hols Hotel Systems, St. Louis, Mo.  
Southern Hotel, The, Baltimore, Md.

**HOUSE MOVING.**  
Eichleay, Jr. Co., John, Pittsburgh.

**HULLS (Steel.)**  
American Steel Dredge Co., Fort Wayne, Ind.

**HUMIDIFYING AND DRYING EQUIPMENT.**  
Grinnell Co., Inc., Providence, R. I.  
Skinner Bros. Mfg. Co., St. Louis, Mo.

**HYDRANTS (Fire.)**  
Ludlow Valve Mfg. Co., The, Troy, N. Y.  
Myers & Bro. Co., The, F. E., Ashland, O.  
Vest Brothers Mfg. Co., Louisville, Ky.  
Wood & Co., R. D., Philadelphia, Pa.

**HYDRO - ELECTRIC POWER COMPANIES (Offering Industrial and Commercial Opportunities.)**

Alabama Power Co., Birmingham, Ala.  
Central Power & Light Co., San Antonio.  
Georgia Power Co., Atlanta, Ga.  
Texas Power & Light Co., Dallas, Texas.

**ICE and Refrigerating Machinery and Supplies.**  
Ingersoll-Rand Co., New York, N. Y.  
Vest Mch. Co., Henry, Louisville, Ky.

**INCINERATORS.**  
Duplex Hanger Co., Cleveland, Ohio.

**INCORPORATORS.**  
Corporation Service Co., Wilmington, Del.  
Delaware Registration Trust Co., Wilmington, Del.

**INJECTORS.**  
Jenkins Bros., New York, N. Y.  
Randle Machinery Co., The Cincinnati, O.

**INSULATING MATERIALS.**  
General Electric Co., Schenectady, N. Y.  
Okonite Co., New York, N. Y.

**INVESTMENT SECURITIES.**  
Electric Bond & Share Co., New York.  
Gay & Co., W. O., New York City.  
Hanchett Bond Co., Inc., The, Chicago, Ill.

Marx & Co., Birmingham, Ala.  
Mercantile Trust Co., Baltimore, Md.  
Nuveen & Co., John, Chicago.  
Peabody & Co., Chicago.

Provident Savings Bank & Trust Co., Cincinnati, Ohio.

Seasongood & Mayer, Cincinnati, Ohio.

Taylor, Wilson & Co., Inc., Cincinnati, O.

**IRON.**  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

—(Ingot, For Culverts, etc.)  
American Rolling Mill Co., Middletown, O.

**JOINTS (Pipe.)**  
Leadite Co., The, Philadelphia, Pa.

**JOIST HANGERS.**

Duplex Hanger Co., Cleveland, Ohio.

**KETTLES (Pavers and Roofers.)**

Honbert Co., Jos., Cincinnati, O.

**LADDERS (Rolling.)**

Myers &amp; Bro. Co., The F. E., Ashland, O.

**—(Wooden.)**Dayton Safety Ladder Co., Cincinnati, O.  
Patent Scaffolding Co., Chicago, Ill.**LAMPS (Incandescent.)**General Electric Vapor Lamp Co., Hoboken, N. J.  
Western Electric Co., New York City.**LATH (Metal.)**

Ingalls Iron Works Co., Birmingham, Ala.

**LATHES.**

Sebastian Lathe Co., Cincinnati, Ohio.

**LIGHTING (Factory and Mill.)**

General Electric Vapor Lamp Co., Hoboken, N. J.

**—Fixtures (Electric.)**Benson Brass & Chandler Works, Kansas City, Mo.  
Western Electric Co., New York City.**LININGS (Flue, Fire Clay.)**Lee Clay Products Co., Clearfield, Ky.  
Owensboro Sewer Pipe Co., Owensboro, Ky.**—(Tube Mill.)**

Fuller Lath Co., Fullerton, Pa.

**LINOLEUM (Battleship, Embossed Inlaid, Inlaid, Jasper.)**

Congoleum-Nairn Inc., Kearny, N. J.

**LITHOGRAPHERS and ENGRAVERS.**Smith & Son Co., Oscar T., Baltimore, Md.  
Young & Selden Co., Baltimore, Md.**LOADING and UNLOADING MACHINERY (Portable.)**Barber-Greene Co., Aurora, Ill.  
Northwest Engineering Co., Chicago, Ill.**LOCOMOTIVES (Compressed Air.)**

Porter Co., H. K., Pittsburgh, Pa.

**—(Fireless Stored Steam.)**

Porter Co., H. K., Pittsburgh, Pa.

**—(Gasoline.)**

Porter Co., H. K., Pittsburgh, Pa.

Whitcomb Co., Geo. D., Rochelle, Ill.

**—(Industrial.)**

Birmingham Rail &amp; Locomotive Co., Birmingham, Ala.

Porter Co., H. K., Pittsburgh, Pa.

Southern Iron &amp; Equipment Co., Atlanta, Ga.

Whitcomb Co., Geo. D., Rochelle, Ill.

**—(Mining.)**

Porter Co., H. K., Pittsburgh, Pa.

Whitcomb Co., Geo. D., Rochelle, Ill.

**—(Railway.)**

Porter Co., H. K., Pittsburgh, Pa.

Southern Iron &amp; Equipment Co., Atlanta, Ga.

Whitcomb Co., Geo. D., Rochelle, Ill.

**LOGGING MACHINERY.**

Clyde Iron Works Sales Co., Duluth, Minn.

**LOOM PICK COUNTER**

Veeder-Root, Inc., Hartford, Conn.

**LUBRICANTS.**

Dixon Crucible Co., Jos., Jersey City, N. J.

Gulf Refining Co., Pittsburgh, Pa.

**LUBRICATORS (Force Feed.)**

Lunkenheimer Co., The, Cincinnati, O.

**LUBRICATION SYSTEMS.**

Alamite Corp., Chicago, Ill.

**LUMBER (Ceiling, Flooring, Siding.)**

Industrial Lumber Co., Elizabeth, La.

Kirby Lumber Co., Houston, Texas.

**—(Creosoted.)**

Amer. Creosote Wks., Inc., New Orleans, La.

Amer. Creosoting Co., Inc., Louisville, Ky.

Ayer &amp; Lord Tie Co., Inc., Chicago, Ill.

Carolina Wood Preserving Co., Charleston, S. C.

Delaware Wood Preserving Co., Phila.

Engling &amp; Russell Co., New York, N. Y.

Gulf States Creos. Co., Hattiesburg, Miss.

Savannah Creos. Co., Savannah, Ga.

**—(Heavy Construction, Pitch, Pine, etc.)**

Brooks-Seaton Corp., Foley, Florida.

Industrial Lumber Co., Elizabeth, La.

Kirby Lumber Co., Houston, Texas.

**—Yellow Pine.**

Brooks-Seaton Corp., Foley, Florida.

**—(Zinc Meta Arsenite Treated.)**

Curtin-Howe Corp., New York City.

**MACHINERY (Special.)**

Bliss Co., E. W., Brooklyn, N. Y.

Earle Gear &amp; Machine Co., Phila., Pa.

Fornholtz Machinery Co., St. Louis, Mo.

General Machine Works, York, Pa.

Whiting Corp., Harvey, Ill.

**—and Supplies (New and Used.)**

Belyea Co., Inc., New York City.

Electric Service Co., Cincinnati, Ohio.

Equip. Sales &amp; Rentals Co., Pittsburgh, Pa.

Heineken Engineering Corp., New York, N. Y.

Marine Metal &amp; Supply Co., New York, N. Y.

Nashville Ind. Corp., Old Hickory, Tenn.

O'Brien Machinery Co., The, Phila., Pa.

Ryerson &amp; Son, Inc., Jos. T., St. Louis, Mo.

Seyfert's Sons, Inc., L. F., Phila., Pa.

Zeiniker Supply Co., W. A., St. Louis, Mo.

**MACHINE TENDERS (Steel.)**

Angle Steel Steel Co., Plainwell, Mich.

**—(Tools.)**

Ryerson &amp; Son, Inc., Jos. T., St. Louis, Mo.

Sebastian Lathe Co., Cincinnati, Ohio.

**—(Used.)**

Delta Equipment Co., Philadelphia, Pa.

O'Brien Machinery Co., Phila., Pa.

**MAIL CHUTES.**

Cutler Mail Chute Co., Rochester, N. Y.

**MARBLE (Producers and Manufacturers.)**

Georgia Marble Co., Tate, Ga.

**MATERIAL ELEVATORS.**

National Equipment Corp., (Insley, C. H. &amp; E.), Milwaukee, Wis.

**METAL-Cutting Machinery.**

Atkins &amp; Co., E. C., Indianapolis, Ind.

Earle Gear &amp; Machine Co., Phila., Pa.

**—Working Machinery.**

Bliss Co., E. W., Brooklyn, N. Y.

**MILL MACHINERY and SUPPLIES.**

Lombard Iron Works &amp; Supply Co., Augusta, Ga.

**MINING MACHINERY.**

McLanahan-Stone Machine Co., Hollidaysburg, Pa.

**MIXERS.**

National Equipment Corp. (Koehring, T. L. Smith, Kwik-Mix), Milwaukee, Wis.

**—(Asphalt.)**

Erie Machine Shops, Erie, Pa.

**—(Hot.)**

Koehring Co., Milwaukee, Wis.

**—(Mortar.)**

Chain Belt Co., Milwaukee, Wis.

Jaeger Machine Co., Columbus, Ohio.

**—(Plaster.)**

Blystone Mfg. Co., Cambridge Springs, Pa.

Chain Belt Co., Milwaukee, Wis.

Dunning &amp; Boschert Press Co., Syracuse, N. Y.

Jaeger Machine Co., Columbus, Ohio.

**MORTAR INGREDIENT.**

Louisville Cement Co., Louisville, Ky.

**MOTORS (Electric.)**

Fairbanks, Morse &amp; Co., Chicago, Ill.

General Electric Co., Schenectady, N. Y.

Howell Electric Motors Co., Howell, Mich.

Western Electric Co., New York City.

Westinghouse Elec. &amp; Mfg. Co., E. Pittsburgh, Pa.

**MOTOR TRUCKS.**

International Harvester Co., of America, Inc., Chicago, Ill.

**NAILS (Cut.)**

Reading Iron Co., Reading, Pa.

**—and Spikes.**

American Steel &amp; Wire Co., Balto., Md.

Gulf States Steel Co., Birmingham, Ala.

Tennessee Coal, Iron &amp; Railroad Co., Birmingham, Ala.

Youngstown Sheet &amp; Tube Co., Youngstown, Ohio.

**NATURAL GAS COMPANIES.**

(Offering Industrial and Commercial Opportunities.)

Arkansas Natural Gas Corp., Shreveport, La.

**OIL (Fuel and Gas.)**

Gulf Refining Co., Pittsburgh, Pa.

**—Cups.**

Lunkenheimer Co., The, Cincinnati, O.

**ORE-WASHING MACHINERY.**

Georgia Iron Works, Augusta, Ga.

McLanahan Stone Machine Co., Hollidaysburg, Pa.

**ORNAMENTAL BRONZE WORK.**

Heath Co., J. S., Waukegan, Ill.

Michaelis Art Bronze Co., Covington, Ky.

**—Iron Work.**

Roanoke Iron &amp; Bridge Wks., Roanoke, Va.

Snead Architectural Iron Works, Louisville, Ky.

Southern Engineering Co., Charlotte, N. C.

Stewart Iron Works Co., Cincinnati, O.

**PACKING (Asbestos, Metallic, Rubber, Leather, etc.)**

Jenkins Bros., New York, N. Y.

Republic Rubber Co., Youngstown, Ohio.

**—Protection (Freight Shipments.)**

Kimberly Clark Corp., Chicago, Ill.

**PAINT (Aluminum.)**

Aluminum Co. of America, Pittsburgh, Pa.

**—(Metal Surfaces.)**

Aluminum Co. of America, Pittsburgh, Pa.

Dixon Crucible Co., Jos., Jersey City, N. J.

**—(Mill White, For Interior.)**

Aluminum Co. of America, Pittsburgh, Pa.

Sonneborn Sons, Inc., L., New York, N. Y.

**—(Preservative.)**

Cabot, Inc., Samuel, Boston, Mass.

Foster Co., Benjamin, Philadelphia, Pa.

**PANELBOARDS.**

Adam Elec. Co., Frank, St. Louis, Mo.

**PARTITIONS (Metal, Folding, Rolling.)**

Kinnear Mfg. Co., The, Columbus, Ohio.

Lupton's Sons Co., David, Phila., Pa.

**—(Sectionfold, Rolling, Wood.)**

Wilson Corp., The, J. G. New York, N. Y.

**PATENT ATTORNEYS.**

Buck, Sterling P., Washington, D. C.

Coleman, Watson E., Washington, D. C.

Eaton, Paul B., Charlotte, N. C.

Sasnett, Edward C., Washington, D. C.

Seymour &amp; Bright, Washington, D. C.

**PATTERNS (Drawing, etc.)**

Haas Pattern Co., A. W., Atlanta, Ga.

**PAVING BLOCKS (Creosoted Wood.)**

American Creosote Works, New Orleans, La.

**—Blocks (Rubber.)**

Serviced Premoulded Products, Inc., Chicago, Ill.

**—(Brick.)**

National Paving Brick Mfrs. Assn., Washington, D. C.

**—Mixers.**

National Equipment Corp. (Koehring, T. L. Smith), Milwaukee, Wis.

**—Plant (Asphalt.)**

Simplicity System Co., Chattanooga, Tenn.

**PENSTOCKS.**

Chattanooga Boiler &amp; Tank Co., Chattanooga, Tenn.

Chicago Bridge &amp; Iron Works, Atlanta, Ga.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Smith Co., S. Morgan, York, Pa.

**PERFORATED METAL.**

Chicago Perforating Co., Chicago, Ill.

Erdle Perforating Co., Rochester, N. Y.

Harrington &amp; King Perf. Co., Chicago, Ill.

Hendrick Mfg. Co., Carbondale, Pa.

Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.

Mundt &amp; Sons, Charles, Jersey City, N. J.

**PETROLEUM REFINERS.**

Gulf Refining Co., Pittsburgh, Pa.

**PHOSPHATE ACID.**

Davison Chemical Co., Baltimore, Md.

**—(Machinery.)**

McLanahan-Stone Machine Co., Hollidaysburg, Pa.

**PIG-IRON.**

Republic Steel Corp., Youngstown, Ohio.

Sloss-Sheffield Steel &amp; Iron Co., Birmingham, Ala.

Tennessee Coal, Iron &amp; Railroad Co., Birmingham, Ala.

**PILE SHOES.**

Jamney, Jr., Jos. A., Phila., Pa.

**PILING (Creosoted.)**

Amer. Creosote Wks., Inc., New Orleans, La.

Amer. Creosoting Co., Inc., Louisville, Ky.

Ayer &amp; Lord Tie Co., Inc., Chicago, Ill.

Carolina Wood Preserving Co., Charleston, S. C.

Savannah Creosoting Co., Inc., Savannah, Ga.

Wales Wood-Preserving Co., Norfolk, Va.

**—(Steel Sheet.)**

Carnegie Steel Co., Pittsburgh, Pa.

Zeiniker Supply Co., W. A., St. Louis, Mo.

**PILLOW BLOCKS.**

Goldens' Fdry. &amp; Mch. Co., Columbus, Ga.

**PIPE.**

Albert &amp; Davidson Pipe Corp., Brooklyn, N. Y.

Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.

Armco Culvert Mfrs. Assn., Middletown, Ohio.

Birmingham Boiler &amp; Engr. Co., Birmingham, Ala.

Central Pipe &amp; Sup. Co., Charleston, W. Va.

Greenpoint Iron &amp; Pipe Co., Inc., Brooklyn, N. Y.

Hudson Pipe &amp; Sup. Co., Bayonne, N. J.

Maryland Pipe &amp; Steel Corp., Baltimore, Md.

National Tube Co., Pittsburgh, Pa.

Pittsburgh Piping &amp; Equip. Co., Pittsburgh, Pa.

Power Piping Co., Pittsburgh, Pa.

Smith Corp., A. O., Milwaukee, Wis.

**—(Cast Iron.)**

Amer. Cast Iron Pipe Co., Birmingham, Ala.

Cast Iron Pipe Research Assn., Chicago, Ill.

Central Foundry Co., The, New York, N. Y.

Glamorgan Pipe &amp; Fdry. Co., Lynchburg, Va.

National Cast Iron Pipe Co., Birmingham, Ala.

U. S. Pipe &amp; Foundry Co., Burlington, N. J.

**—(Dredge.)**

Abendroth &amp; Root Mfg. Co., New York, N. Y.

**—(Hammer-Welded.)**

National Tube Co., Pittsburgh, Pa.

**—(Iron and Steel.)**

Ryerson &amp; Son, Inc., Jos. T., St. Louis, Mo.

**—(Riveted.)**

Abendroth &amp; Root Mfg. Co., New York, N. Y.

**—(Second-Hand.)**

Albert &amp; Davidson Pipe Corp., Brooklyn, N. Y.

Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.

Central Pipe &amp; Sup. Co., Charleston, W. Va.

Greenpoint Iron &amp; Pipe Co., Inc., Brooklyn, N. Y.

Hudson Pipe &amp; Supply Co., Bayonne, N. J.

Marine Metal &amp; Supply Co., New York, N. Y.

Maryland Pipe &amp; Steel Corp., Baltimore, Md.

**—(Spiral Riveted.)**

Abendroth &amp; Root Mfg. Co., New York, N. Y.

Taylor Forge &amp; Pipe Wks., Chicago, Ill.

**—(Steel.)**

Bethlehem Steel Co., Bethlehem, Pa.

National Tube Co., Pittsburgh, Pa.

Pittsburgh Piping &amp; Equip. Co., Pittsburgh, Pa.

Power Piping Co., Pittsburgh, Pa.

Republic Steel Corp., Youngstown, Ohio.

Smith Corp., A. O., Milwaukee, Wis.

Youngstown Sheet &amp; Tube Co., Youngstown, Ohio.

**—(Wrought Iron.)**

Reading



**PLATES (Steel.)**

Bethlehem Steel Co., Bethlehem, Pa.  
Carnegie Steel Co., Pittsburgh, Pa.  
Central Iron & Steel Co., Harrisburg, Pa.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Granite City Steel Co., Granite City, Ill.  
Ryerson & Son, Inc., Jos. T., St. Louis and New York.  
Tennessee Coal, Iron & Railroad Co., Birmingham.

**PNEUMATIC TOOLS.**

Chicago Pneumatic Tool Co., New York.  
Ingersoll-Rand Co., New York, N. Y.

**POLES (Crossed.)**

Amer. Crosstie Wks., Inc., New Orleans.  
Amer. Crosstieing Co., Inc., Louisville, Ky.  
Ayer & Lord Tie Co., Inc., Chicago.  
Brown Wood Preserving Co., Louisville, Ky.  
Carolina Wood Preserving Co., Charleston, S. C.  
Savannah Crosstieing Co., Savannah, Ga.  
Taylor-Colquhitt Co., Spartanburg, S. C.

**—(Steel.)**

Bates Steel Corp., Walter, Gray, Ind.

**—(Tubular, Steel.)**

National Tube Co., Pittsburgh, Pa.

**—(Zinc Meta Arsenite Treated.)**

Curtin-Howe Corp., New York City.

**POLISHING MACHINERY.**

(Wheels, Blocks.)

Carborundum Co., Niagara Falls, N. Y.

**PORTABLE HOUSES (Metal.)**

Braden Steel Corp., Tulsa, Okla.

Maryland Metal Building Co., Balto., Md.

**POST CAPS.**

Duplex Hanger Co., Cleveland, Ohio.

**POSTS (Cast Iron, Railway and Highway.)**

U. S. Pipe & Foundry Co., Burlington, N. J.

**POWER TRANSMISSION MACHINERY.**

American Pulley Co., Philadelphia, Pa.

Diamond Chain & Mfg. Co., Indianapolis.

Golden's Fdy. & Mch. Co., Columbus, Ga.

Morse Chain Co., Ithaca, N. Y.

O'Brien Machinery Co., Phila., Pa.

Schofield's Sons Co., J. S., Macon, Ga.

Wood's Sons Co., T. B., Chambersburg, Pa.

**—(Pumps.)**

Luttwiler Pumping Engine Co., Rochester, N. Y.

**PREHEATERS (Air.)**

Combustion Engr. Corp., New York City.

**PRESSES, (Baling, Cottonseed Oil, Hydraulic and Power.)**

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

Ripley Foundry & Machine Co., Ripley, O.

—(Hydraulic Wheel.)

Inter-State Fdry. & Mch. Wks., Johnson City, Tenn.

**—(Metal Stamping.)**

Bliss Co., E. W., Brooklyn, N. Y.

**PRINTERS (Book, Catalog, Job.)**

Smith & Son Co., Oscar T., Baltimore Md.

Young & Seliden Co., Baltimore, Md.

**PRODUCER (Gas Machines.)**

Gas-O-Flame Stove Works, Fort Deposit, Md.

Morgan Construction Co., Worcester, Mass.

Wood & Co., B. D., Phila., Pa.

**PULLER-JACKS.**

Edelblute Co., T. H., Pittsburgh, Pa.

**PULLEYS (Friction Clutch.)**

Caldwell Co., Inc., W. E., Louisville, Ky.

Schultz & Son, A. L., Chicago, Ill.

Wood's Sons Co., T. B., Chambersburg, Pa.

**—(Motor and Machine.)**

American Pulley Co., Philadelphia, Pa.

**—(Steel Split.)**

American Pulley Co., Phila., Pa.

**—Shafting and Hangers.**

American Pulley Co., Phila., Pa.

Golden's Fdry. & Mch. Co., Columbus, Ga.

Wood's Sons Co., T. B., Chambersburg, Pa.

**PULVERIZED COAL EQUIPMENT.**

Combustion Engr. Corp., New York, N. Y.

Fuller Lehigh Co., Fullerton, Pa.

Whiting Corp., Harvey, Ill.

**PULVERIZERS (See Crushing and Pulverizing Machinery.)****PUMPING MACHINERY.**

Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.

Chain Belt Co., Milwaukee, Wis.

Cook, Inc., A. D., Lawrenceburg, Ind.

Fairbanks, Morse & Co., Chicago, Ill.

Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.

Keystone Pump & Drill Co., Beaver Falls, Pa.

Luttwiler Pumping Engine Co., Rochester, N. Y.

Myers & Bro. Co., The F. E., Ashland, Ohio.

National Equipment Corp. (C. H. & E. Division), Milwaukee, Wis.

Platt Iron Works, Dayton, Ohio.

Union Steam Pump Co., Battle Creek, Mich.

Viking Pump Co., Cedar Falls, Iowa.

Virginia Mch. & Well Co., Richmond, Va.

**PUMPS (Air.)**

Manistee Iron Works Co., Manistee, Mich.

**—(Air Lift.)**

Ingersoll-Rand Co., New York, N. Y.

Sullivan Machinery Co., Chicago, Ill.

**—(Boiler Feed.)**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.

DeLaval Steam Turbine Co., Trenton, N. J.

Erie Pump & Engine Wks., Medina, N. Y.

Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.

Manistee Iron Works Co., Manistee, Mich.

Myers & Bro. Co., The F. E., Ashland, O.

**—(Centrifugal.)**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.

DeLaval Steam Turbine Co., Trenton, N. J.

Emerson Pump & Valve Co., Alexandria, Va.

Erie Pump & Engine Wks., Medina, N. Y.

Fairbanks, Morse & Co., Chicago, Ill.

Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.

Jaeger Machine Co., Columbus, Ohio.

Layne & Bowler, Inc., Memphis, Tenn.

Manistee Iron Works Co., Manistee, Mich.

Morris Machine Wks., Baldwinville, N. Y.

Novo Engine Co., Lansing, Mich.

Union Steam Pump Co., Battle Creek, Mich.

**—(Contractors.)**

Emerson Pump & Valve Co., Alexandria, Va.

Erie Pump & Engine Wks., Medina, N. Y.

Novo Engine Co., Lansing, Mich.

**—(Deep Well.)**

Cook, Inc., A. D., Lawrenceburg, Ind.

Keystone Pump & Drill Co., Beaver Falls, Pa.

Layne & Bowler, Inc., Memphis, Tenn.

Luttwiler Pumping Engine Co., Rochester, N. Y.

Novo Engine Co., Lansing, Mich.

—(Diaphragm.)

Novo Engine Co., Lansing, Mich.

**—(Hydraulic.)**

Dunning & Boschert Press Co., Inc., Syracuse, N. Y.

**—(Power.)**

Platt Iron Works, Dayton, Ohio.

Sterling Engine Co., Buffalo, N. Y.

—(Pulverized Coal.)

Fuller Lehigh Co., Fullerton, Pa.

**—(Rotary.)**

Viking Pump Co., Cedar Falls, Iowa.

—(Sand and Dredging.)

Elliot Machine Corp., Baltimore, Md.

Erie Pump & Engine Wks., Medina, N. Y.

Georgia Iron Works, Augusta, Ga.

**—(Steam.)**

Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.

Emerson Pump & Valve Co., Alexandria, Va.

Fairbanks, Morse & Co., Chicago, Ill.

Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.

Platt Iron Works, Dayton, Ohio.

Union Steam Pump Co., Battle Creek, Mich.

**—(Vacuum.)**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

Chicago Pneumatic Tool Co., New York.

Ingersoll-Rand Co., New York, N. Y.

Sullivan Machinery Co., Chicago, Ill.

—(Water Works.)

Layne & Bowler, Inc., Memphis, Tenn.

Manistee Iron Works Co., Manistee, Mich.

**PUNCHING and SHEARING MACHINERY.**

Bliss Co., E. W., Brooklyn, N. Y.

Whitney Metal Tool Co., Rockford, Ill.

**RACK BAKES.**

Newport News Shipbuilding & Drydock Co., Newport News, Va.

**RADIATOR ENCLOSURES.**

Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.

**RAILINGS (Iron Pipe.)**

Pipe Railing Constr. Co., Long Island City, N. Y.

—(Banks and Offices.)

Ludlow Saylor Wire Co., The St. Louis, Mo.

**RAILROAD Equipment and Supplies (New.)**

Robinson & Orr, Pittsburgh, Pa.

Whiting Corp., Harvey, Ill.

**—Equipment and Supplies (Used.)**

Birmingham Rail & Loco. Co., Birmingham.

Equip. Sales & Rentals Co., Pittsburgh.

Levis & Co., Henry, Philadelphia, Pa.

Smith & Co., W. M., Birmingham, Ala.

Southern Iron and Equip. Co., Atlanta.

Zelicker Supply Co., W. A., St. Louis.

**—(Frogs and Switches.)**

Bethlehem Steel Co., Bethlehem, Pa.

Frank, M. K., Pittsburgh, Pa.

Koppel Ind. Car & Equip. Co., Koppel, Pa.

Robinson & Orr, Pittsburgh, Pa.

**RAILROADS — (Offering Industrial, Agricultural and Commercial Opportunities.)**

Atlanta and West Point R. R., Atlanta.

Central of Georgia Rwy., Savannah, Ga.

Missouri - Kansas - Texas Lines, Dallas, Texas.

Missouri Pacific Lines, St. Louis, Mo.

Model Land Company, Flagler System, St. Augustine, Fla.

Norfolk & Western Railway, Roanoke, Va.

Tennessee Central Railway, Nashville, Tenn.

**RAILS (New and Used.)**

Birmingham Rail & Locomotive Co., Birmingham, Ala.

Carnegie Steel Co., Pittsburgh, Pa.

Frank, M. K., Pittsburgh, Pa.

Levis & Co., Henry, Philadelphia, Pa.

Perry, Burston, Doane Co., Philadelphia.

Robinson & Orr, Pittsburgh, Pa.

Smith & Co., W. M., Birmingham, Ala.

Southern Iron & Equip. Co., Atlanta, Ga.

Sweet's Steel Co., Williamsport, Pa.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Weller & Co., Birmingham, Ala.

Zelicker Supply Co., W. A., St. Louis.

**RAILWAYS (Industrial.)**

Easton Car & Construction Co., Easton, Pa.

Koppel Ind. Car & Equip. Co., Koppel, Pa.

**—(Marine.)**

Charleston Dry Dock and Machine Co., Charleston, S. C.

**RECEPTACLES (Self-losing — Waste Paper.)**

Whitaker Paper Co., Baltimore, Md.

**REELS and SPOOLS. (Pressed Metal.)**

American Pulley Co., Philadelphia, Pa.

**REFRATORIES.**

Harbison-Walker Refractories Co., Pittsburgh.

Taylor Sons Co., Charles, Cincinnati.

**REFRIGERATING Machinery (See Ice and Refrigerating Machinery and Supplies.)****REINFORCING for Concrete.**

American Steel and Wire Co., Balto., Md.

Carnegie Steel Co., Pittsburgh, Pa.

Connors Steel Co., Birmingham, Ala.

Dietrich Brothers, Baltimore, Md.

Gulf States Steel Co., Birmingham, Ala.

Knoxville Iron Co., Knoxville, Tenn.

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

Southern Engineering Co., Charlotte, N. C.

Truscon Steel Co., Youngstown, O.

**RESURFACING MATERIALS (Floor, Roof and Roadways.)**

Stonhard Co., Phila., Pa.

**RETORTS (Special Process— Riveted or Welded.)**

Biggs Boiler Works, Akron, Ohio

**RIVER & HARBOR IMPROVEMENTS, (Dredging, Docks, Wharves, etc.)**

Arundel Corp., The, Baltimore, Md.

Atlantic Gulf and Pacific Co., New York.

Kansas City Bridge Co., Kansas City.

**RIVETS.**

Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.

**ROAD and Street Machinery.**

Acme Road Mchry. Co., Frankfort, N. Y.

Adams Co., J. D., Indianapolis, Ind.

Austin-Western Road Mchry. Co., Chicago.

Blair-Knox Co., Pittsburgh, Pa.

Buffalo-Springfield Roller Co., Springfield, O.

Caterpillar Tractor Co., San Leandro, Cal.

Erie Machine Shops, Erie, Pa.

Huber Mfg. Co., The, Marion, Ohio.

Universal Crane Co., Lorain, Ohio.

**—and Street Material.**

Bituminous Earth Road Corp., Raleigh, N. C.

Boxley & Co., W. W., Roanoke, Va.

Shoss-Sheffield Steel and Iron Co., Birmingham, Ala.

Truscon Steel Co., Youngstown, O.

Woodstock Slag Corp., Birmingham, Ala.

—Graders and Scrapers.

Acme Road Mchry. Co., Frankfort, N. Y.

Adams Co., J. D., Indianapolis, Ind.

Austin-Western Road Mchry. Co., Chicago.

Caterpillar Tractor Co., San Leandro, Cal.

—Oils and Preservatives.

Gulf Refining Co., Pittsburgh, Pa.

—Reinforcement (Welded Fabric.)

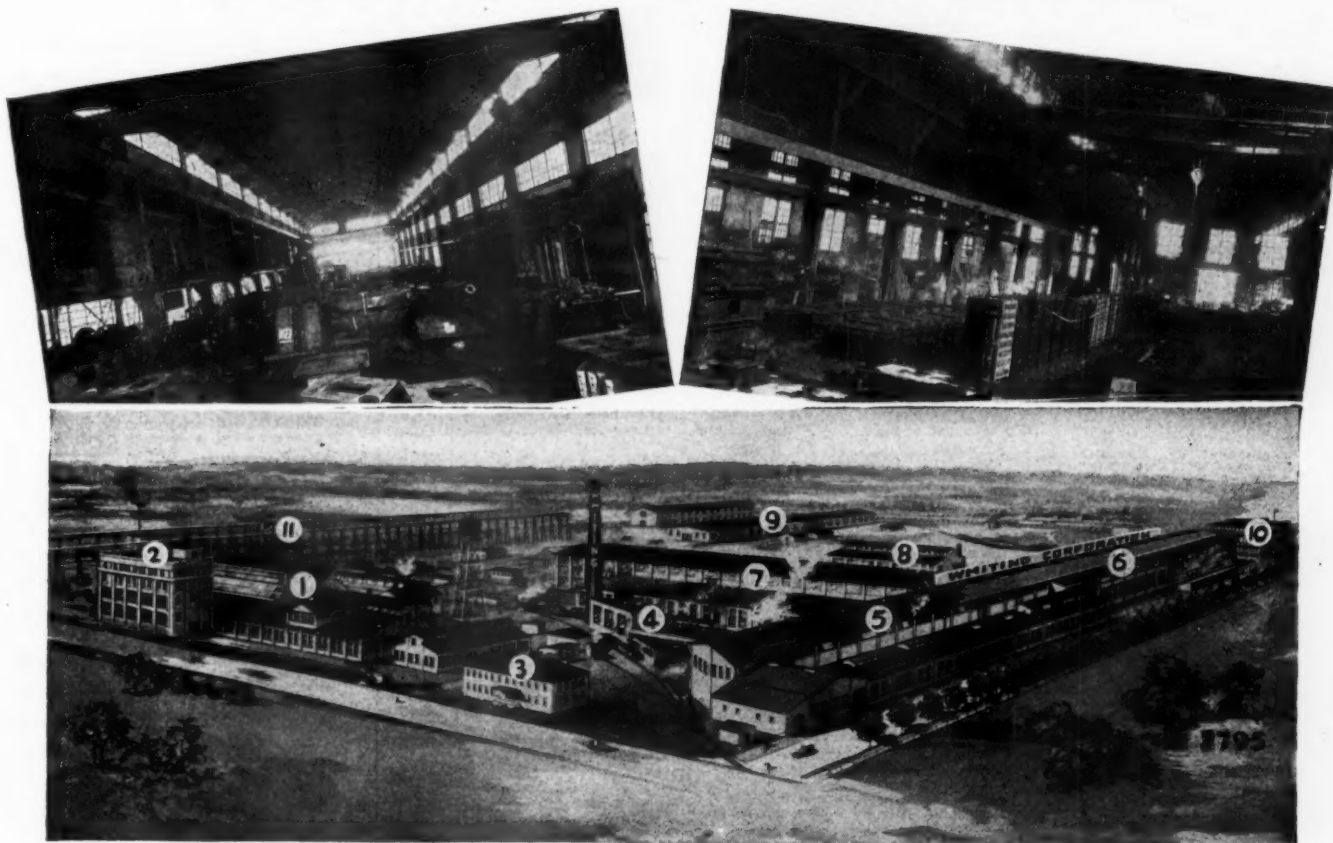
American Steel & Wire Co., Balto., Md.

—Rollers (Steam and Gasoline.)

Acme Road Mchry. Co., Frankfort, N. Y.

Austin-Western Road Mchry. Co., Chicago.

# To Better Serve the South!



Three modern plants combine facilities, forming an industrial group of unusual scope for the manufacture of all kinds of heavy machinery and equipment

## Whiting Products

### CRANE DIVISION

Electric Travelling Cranes  
Bucket, Gantry and Magnet Cranes

### FOUNDRY EQUIPMENT DIVISION

Cupolas      Core Ovens  
Cupola Chargers      Trucks & Cars  
Ladles      Turntables  
Tumblers      Air Hoists  
Dust Filters

### RAILWAY EQUIPMENT DIVISION

Drop Pit Tables  
Locomotive Hoists  
Coach Hoists  
Crossover Bridges  
Transfer Tables  
Locomotive Spotters  
Car Washing Systems  
Bus Turntables

### WHITING-SWENSON CO.

Engineering, Development, Research  
for the Process Industries  
Complete Plants Designed, Equipped  
and put into operation

### GRINDLE DIVISION

Pulverized Coal Systems

### HARRINGTON DIVISION

Automatic Stokers

## Swenson Products

Evaporators  
Crystallizers  
Pulp Mill Equipment  
Chemical Machinery

## Goslin-Birmingham Products

Sugar Refining Machinery  
Evaporators  
Filters  
Special Machinery

The association of these three modern plants is a distinct benefit to the industrial South. It will enable the Southern manufacturer to purchase at home and at better prices much of the industrial equipment that is now shipped in from a distance.

At the same time the addition of Whiting Corporation's lines will materially increase the production of the Birmingham plants.

The joint personnel of these companies presents a very complete and diversified group of engineering and industrial talent. Backed by 40 years of successful manufacturing experience, this combination presents an unusual opportunity to be of service to the industrial South.

Let us work with you in the solution of your problems.

*Estimates on request.*

## WHITING CORPORATION

Harvey (Chicago Suburb) Illinois

## GOSLIN-BIRMINGHAM MANUFACTURING CO., Inc.

Birmingham, Alabama



## —(Textile.)

American Klon Scale Co., New York City.

**SCHOOLS (Correspondence.)**

International Correspondence Schools, Scranton, Pa.

**SCOOPS (Hand.)**

American Mfg. Co., Chattanooga, Tenn.

## —Wheeled.

Riddell Co., W. A., Bucyrus, Ohio.

**SCRAPERS (Drag and Wheel.)**

Adams Co., J. D., Indianapolis, Ind.  
Austin-Western Road Machinery Co., Chicago  
Bauer Bros., Chicago, Ill.

**SCRAP IRON AND STEEL.**

Huntz Sons, M. J., Philadelphia, Pa.  
Perry, Burton, Deane Co., Philadelphia, Pa.  
Smith & Co., W. M., Birmingham, Ala.

**SCREENING (For Concrete and Road Construction.)**

American Limestone Co., Knoxville, Tenn.

**SCREENS (Sand, Gravel, Stone, Coal, Ore, etc.)**

Chicago Perforating Co., Chicago, Ill.  
Erdle Perforating Co., Rochester, N. Y.  
Hendrick Mfg. Co., Carbondale, Pa.  
Ludlow Saylor Wire Co., The St. Louis, Mo.  
McLanahan-Stone Machine Co., Hollidaysburg, Pa.  
Mundi & Sons, Charles, Jersey City, N. J.  
Stephens-Adams Mfg. Co., Birmingham, Ala.  
Universal Crusher Co., Cedar Rapids, Iowa.

**SCREW-Machine Products.**

Progressive Mfg. Co., Torrington, Conn.

**SCREWS (Machine.)**

Progressive Mfg. Co., Torrington, Conn.

**SEAWALLS.**

Shore-Line Builders, Inc., Jacksonville, Fla.

**SEPARATORS (Dust.)**

Raymond Bros., Impact Pulv. Co., Chicago.

**SEWAGE Disposal Apparatus.**

Pacific Flush-Tank Co., New York, N. Y.

**SEWER Joint Compounds.**

Pacific Flush-Tank Co., New York, N. Y.  
Serviced Premoulded Products, Inc., Chicago, Ill.

## —Pipe (Vitrified.)

Bannon Pipe Co., Louisville, Ky.  
Cambria Clay Products Co., Blackfork, O.  
Dee Co., Wm. E., Oak Hill, Ohio.  
Lee Clay Products Co., Cleardale, Ky.  
Owensboro Sewer Pipe Co., Owensboro, Ky.

**SEWER PIPE MACHINERY (Concrete.)**

Quinn Wire & Iron Works, Boone, Iowa.

**SHADES (Offset.)**

Hough Shade Corp., Chicago, Ill.

**SHAPING.**

Ryerson & Sons, Inc., Jos. T., St. Louis and New York.

## —(Cold Rolled.)

Bliss & Laughlin, Inc., Harvey, Ill.

## —(Flexible.)

Strand & Co., N. A., Chicago, Ill.

## —Material (Tubular.)

National Tube Co., Pittsburgh, Pa.

**SHARPENING Stones.**

Carborundum Co., Niagara Falls, N. Y.

**SHEET Metal Work.**

National Blow Pipe & Mfg. Co., Ltd., New Orleans, La.

Skinner Bros. Mfg. Co., St. Louis, Mo.

## —Metal Working Machinery.

Bliss Co., E. W., Brooklyn, N. Y.  
Whitney Metal Tool Co., Rockford, Ill.  
Yoder Co., The, Cleveland, Ohio.

## —Steel and Iron.

American Rolling Mill Co., Middletown, O.  
American Sheet and Tin Plate Co., Pittsburgh, Pa.  
Bethlehem Steel Co., Bethlehem, Pa.  
Granite City Steel Co., Granite City, Ill.  
Republic Steel Corp., Youngstown, Ohio.  
Ryerson & Son, Inc., Jos. T., St. Louis and New York.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Youngstown Sheet & Tube Co., Youngstown, O.

**SHEETS (Asbestos.)**

Ambler Asbestos Shingle & Sheathing Co., Ambler, Pa.  
Eternit, Inc., St. Louis, Mo.

**—(Steel—Asbestos Covered.)**

Robertson Co., H. H., Pittsburgh, Pa.

**SHELVING (Unit.)**

Lupton's Sons Co., David, Phila., Pa.

**SHINGLES (Asbestos.)**

Ambler Asbestos Shingle & Sheathing Co., Ambler, Pa.  
Eternit, Inc., St. Louis, Mo.

## —(Stain.)

Cabot, Inc., Samuel, Boston, Mass.

**SHOVELS (Hand.)**

American Mfg. Co., Chattanooga, Tenn.

## —(Steam, Gas and Electric Power.)

Bucyrus-Erie Co., Erie, Penna.  
Harnischfeger Corp., Milwaukee, Wis.  
Industrial Brownist Corp., Cleveland, O.  
National Equipment Corp. (Kochring, Insley), Milwaukee, Wis.  
Northwest Engineering Co., Chicago, Ill.  
Ohio Power Shovel Co., Lima, Ohio.  
Thos. Shovel Co., The, Lorain, Ohio.  
Universal Power Shovel Co., Milwaukee, Wis.

**SHUTTERS (Steel.)**

Merchant & Evans Co., Philadelphia, Pa.

## —(Steel and Wood Bifolding.)

Kinnear Mfg. Co., The, Columbus, Ohio.

**SILICATE OF SODA.**

Grasselli Chemical Co., Inc., Birmingham, Ala.

**SITES (Manufacturing.)**

Alabama Power Co., Birmingham, Ala.  
Arkansas Natural Gas Corp., Shreveport, La.  
Atlanta and West Point R. R., Atlanta.  
Brown & Co., Chattanooga, Tenn.  
Central of Georgia Rwy., Savannah, Ga.  
Central Power & Light Co., San Antonio.  
Galveston City of, Galveston, Texas.  
Georgia Power Co., Atlanta, Ga.  
Jacksonville, City of Jacksonville, Florida.  
Missouri - Kansas - Texas Lines, Dallas, Texas.  
Missouri Pacific Line, St. Louis, Mo.  
Model Land Company, (Flagler System), St. Augustine, Fla.  
Norfolk & Western Railway, Roanoke, Va.  
Tennessee Central Railway, Nashville, Tenn.  
Texas Power & Light Co., Dallas, Texas.

**SKYLIGHTS.**

Milcor Steel Co., Milwaukee, Wis.  
Robertson Co., H. H., Pittsburgh, Pa.

**SLABS (Concrete Floor.)**

American Cement Tile Mfg. Co., Pittsburgh, Pa.

## —(Concrete Roof.)

American Cement Tile Mfg. Co., Pittsburgh, Pa.

**SLAG, For Concrete.**

Gloss-Sheffield Steel and Iron Co., Birmingham, Ala.  
Woodstock Slag Corp., Birmingham, Ala.  
—(Furnace.)  
Gloss-Sheffield Steel and Iron Co., Birmingham, Ala.  
Woodstock Slag Corp., Birmingham, Ala.

**SLINGS (Chain.)**

Woodhouse Chain Works, Trenton, N. J.

## —(Wire Rope.)

Roehling's Sons Co., John A., Trenton, N. J.

**SLUICE GATES AND APPLIANCES.**

Smith Co., S. Morgan, York, Pa.

**SNATCH BLOCKS (For Wire and Manila Rope.)**

Patterson Co., W. W., Pittsburgh.

**SPADES.**

American Mfg. Co., Chattanooga, Tenn.

**SPEED REDUCERS.**

Harle Gear & Mach. Co., Phila., Pa.  
Morse Chain Co., Ithaca, N. Y.  
Stephens-Adams Mfg. Co., Birmingham, Ala.

**SPIKES, (Railroad, Ship.)**

Bethlehem Steel Co., Bethlehem, Pa.  
Republic Steel Corp., Youngstown, Ohio.  
Sweet's Steel Co., Williamsport, Pa.

**SPINNINGS (Metal for Aircraft.)**

Benson Brass & Chandler Works, Kansas City, Mo.

**SPRINGS (Machinery, Railway, Spiral Steel.)**

American Steel & Wire Co., Balto., Md.  
Raymond Mfg. Co., Corry, Pa.

**—(Wire—All Kinds.)**

American Steel & Wire Co., Balto., Md.

**SPRINKLERS (Automatic Fire.)**

Grinnell Co., Inc., Providence, R. I.

**SPROCKETS.**

Diamond Chain & Mfg. Co., Indianapolis.  
Morse Chain Co., Ithaca, N. Y.

**STACKS (Iron and Steel.)**

Biggs Boiler Works Co., Akron, Ohio.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge and Iron Works, Atlanta.  
Downingtown Iron Works, Downingtown, Pa.  
Hammond Iron Works, Warren, Pa.  
Hedges Walsh Weldner Co., Chattanooga, Tenn.  
Ingalls Iron Works Co., Birmingham, Ala.  
Mecklenburg Iron Works, Charlotte, N. C.  
Phoenix Iron Co., The, Phila., Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

**STAINS (Shingle, Woodwork.)**

Cabot, Inc., Samuel, Boston, Mass.

**STAIR Steps (Safety.)**

Irving Iron Works Co., Long Is. City, N.Y.

## —Treads.

Bates Steel Corp., Walter, Gray, Ind.  
Central Iron & Steel Co., Harrisburg, Pa.

**STAMPING (Sheet Metal.)**

American Pulley Co., Philadelphia, Pa.

## —Steel (All Kinds.)

Commercial Shearing & Stamping Co., Youngstown, Ohio.

**STANDPIPES.**

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Works, Atlanta, Ga.  
Hammond Iron Works, Warren, Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

**STATIONERS (Envelopes, Letter and Billheads, etc.)**

Smith & Son Co., Oscar T., Baltimore, Md.  
Young & Seiden Co., Baltimore, Md.

**STEAM SHOVELS.**

Bucyrus-Erie Co., Erie, Pa.  
Thos. Shovel Co., The, Lorain, Ohio.

## —Specialties.

Jenkins Bros., New York, N. Y.  
Lunkenheimer Co., The, Cincinnati, O.  
Mueller Co., Decatur, Ill.

## —Traps.

Jenkins Bros., New York, N. Y.

**STEEL.**

Bethlehem Steel Co., Bethlehem, Pa.  
Central Iron & Steel Co., Harrisburg, Pa.  
Dietrich Brothers, Baltimore, Md.  
Gulf States Steel Co., Birmingham, Ala.  
Republic Steel Corp., Youngstown, Ohio.  
Ryerson & Son, Inc., Jos. T., St. Louis and New York.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Virginia Bridge & Iron Co., Roanoke, Va.

## —(Alloy.)

Timken Roller Bearing Co., Canton, Ohio.

## —(Cold Drawn.)

Bliss & Laughlin, Inc., Harvey, Ill.

## —(Cold Rolled.)

American Steel & Wire Co., Balto., Md.

Bliss & Laughlin, Inc., Harvey, Ill.

## —(Information Only.)

American Institute of Steel Construction, Inc., New York City.

## —(Special Analysis.)

Timken Roller Bearing Co., Canton, Ohio.

## —(Tool, High Speed.)

Bethlehem Steel Co., Bethlehem, Pa.

## —Buildings (Designers and Builders.)

American Bridge Co., New York, N. Y.  
Belmont Iron Works, Philadelphia, Pa.  
Braden Steel Corp., Tulsa, Okla.  
Butler Mfg. Co., Kansas City, Mo.  
Carolina Steel & Iron Co., Greensboro, N. C.  
Champion Bridge Co., Wilmington, O.  
Eichleay, Jr. Co., John, Pittsburgh.  
Ingalls Iron Works Co., Birmingham, Ala.  
McClintic-Marshall Co., Pittsburgh, Pa.  
Phoenix Iron Co., The, Phila., Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Richmond Strus Steel Co., Richmond, Va.  
Virginia Bridge & Iron Co., Roanoke, Va.  
—Forms (Curb, Gutter, Side-walk, Road.)  
Blaw-Knox Co., Pittsburgh, Pa.  
—Plate Construction (Riveted or Welded.)  
Biggs Boiler Works Co., Akron, Ohio.

**Birmingham Boiler & Eng. Co., Birmingham, Ala.**

Bristol Steel & Iron Works, Inc., Bristol, Va.  
Carolina Steel & Iron Co., Greensboro, N. C.  
Central Iron & Steel Co., Harrisburg, Pa.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago Bridge & Iron Works, Atlanta, Ga.  
Combustion Engr. Corp., New York City.  
Hammond Iron Works, Warren, Pa.  
Hedges Walsh Weldner Co., Chattanooga, Tenn.  
Ingalls Iron Works Co., Birmingham, Ala.  
Mecklenburg Iron Works, Charlotte, N. C.  
Phoenix Iron Co., The, Phila., Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

**STOKERS (Mechanical.)**

Babcock & Wilcox Co., The, New York.  
Combustion Engr. Corp., New York City.  
Whiting Corp., Harvey, Ill.

**STORAGE Batteries.**

Electric Storage Battery Co., Philadelphia.

## —Bins (Steel.)

Blaw-Knox Co., Pittsburgh, Pa.

**STRIPS (Steel.)**

American Steel & Wire Co., Baltimore.

**STRUCTURAL STEEL (Hot Galvanized.)**

Bessemer Galvanizing Works, Birmingham.

## —and Iron.

American Bridge Co., New York, N. Y.  
Belmont Iron Works, Philadelphia, Pa.  
Bristol Steel & Iron Works, Inc., Bristol, Va.  
Carnegie Steel Co., Pittsburgh, Pa.  
Carolina Steel & Iron Co., Greensboro, N. C.  
Champion Bridge Co., Wilmington, Ohio.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Converse Bridge & Steel Co., Chattanooga, Tenn.  
Dietrich Brothers, Baltimore, Md.  
Eichleay, Jr. Co., John, Pittsburgh.  
Erie Steel Constr. Co., Erie, Pa.  
Ingalls Iron Works Co., Birmingham, Ala.  
McClintic-Marshall Co., Pittsburgh, Pa.  
Nashville Bridge Co., Nashville, Tenn.  
Phoenix Iron Co., The, Phila., Pa.  
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
Republic Steel Corp., Youngstown, Ohio.  
Richmond Strus Steel Co., Richmond, Va.  
Roanoke Iron & Bridge Works, Inc., Roanoke, Va.  
Ryerson & Son, Inc., Jos. T., St. Louis and New York.  
Snead Architectural Iron Works, Louisville, Ky.  
Southern Engineering Co., Charlotte, N. C.  
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.  
Virginia Bridge & Iron Co., Roanoke, Va.

**SULPHATE OF ALUMINA.**

Grasselli Chemical Co., Inc., Birmingham, Ala.

**SULPHIDE OF SODA.**

Grasselli Chemical Co., Inc., Birmingham, Ala.

**SULPHURIC ACID.**

Davidson Chemical Co., The, Balto., Md.  
Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

**SUPER-HEATERS (Steam.)**

Babcock & Wilcox Co., The, New York.

**SURVEYS (Industrial.)**

Dame-Wolfe Co., Washington, D. C.  
MacGillivray & Crandall, Inc., Cambridge, Mass.  
Technical Service Co., New York, N. Y.

## —Quantity.

Rowan, W. E., Charlotte, N. C.  
Spring, Charles Herbert, Greensboro, N. C.  
Williams, O. F., Charlotte, N. C.

**SURVEYING INSTRUMENTS.**

Weber Co., Inc., F., Philadelphia, Pa.

**SWINGING ENGINES.**

Dake Engine Co., Grand Haven, Mich.

**SWITCHBOARDS, SWITCHES, ETC.**

Adam Elec. Co., Frank, St. Louis.  
General Electric Co., Schenectady, N. Y.  
Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.

**SYSTEMS (Business.)**

Ernst & Ernst, New York, N. Y.

**TACKLE BLOCKS (For Wire and Manila Rope.)**

Patterson Co., W. W., Pittsburgh.

LARGE

OR

SMALL



MARKET STREET NATIONAL BANK BUILDING, PHILADELPHIA  
 RITTER & SHAY, Architects and Engineers WM. STEELE & SONS CO., General Contractors AMERICAN BRIDGE CO., Fabricators

STATE SAVINGS BANK, ST. PAUL

TOLTZ, KING & DAY, INC., Architects CHAS. SKOOGUN, General Contractor ST. PAUL FOUNDRY CO., Fabricators



A conspicuous feature in the success of Carnegie Beams is their adaptability to all construction requirements, regardless of size or type of architecture. For the towering skyscraper challenging the ingenuity of the most skilled structural steel designers, or the small building requiring only a few tons of steel, Carnegie Beams offer a simplicity of detail, an ease of fabrication and erection, and a flexibility of design never before possible in structural steel. Carnegie Beams possess many unique advantages for those interested in economical and efficient steel construction. They merit your investigation.

**CARNEGIE STEEL CO., PITTSBURGH, PA.**

Subsidiary of United States Steel Corporation

73

# CARNEGIE BEAMS



**TANKS (Air Compressor.)**

Air-Tight Steel Tank Co., Pittsburgh, Pa.

Seafie &amp; Sons, Wm. B., Oakmont, Pa.

Titusville Iron Works Co., Titusville, Pa.

**—(Elevated Steel.)**

Caldwell Co., Inc., W. E., Louisville, Ky.

Chattanooga Boiler &amp; Tank Co., Chattanooga, Tenn.

Chicago Bridge &amp; Iron Works, Atlanta, Ga.

Cole Mfg. Co., R. D., Newnan, Ga.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Schenck's Sons Co., J. S., Macon, Ga.

Virginia Bridge &amp; Iron Co., Roanoke, Va.

**—(Elevated Wood.)**

Caldwell Co., Inc., W. E., Louisville, Ky.

Davis &amp; Son, G. M., Palatka, Fla.

Woodford Wood Tank Mfg. Co., G., Paschall P. O., Philadelphia.

**—(Iron and Steel.)**

Air-Tight Steel Tank Co., Pittsburgh, Pa.

American Bridge Co., New York, N. Y.

Biggs Boiler Works Co., Akron, Ohio.

Chattanooga Boiler &amp; Tank Co., Chattanooga, Tenn.

Chicago Bridge &amp; Iron Works, Atlanta, Ga.

Cole Mfg. Co., R. D., Newnan, Ga.

Downingtown Iron Works, Downingtown, Pa.

Hammond Iron Works, Warren, Pa.

Lombard Iron Works &amp; Supply Co., Augusta, Ga.

McClintic-Marshall Co., Pittsburgh, Pa.

Mecklenburg Iron Works, Charlotte, N. C.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Seafie &amp; Sons, Wm. B., Oakmont, Pa.

Schenck's Sons Co., J. S., Macon, Ga.

Titusville Iron Works Co., Titusville, Pa.

Virginia Bridge &amp; Iron Co., Roanoke, Va.

Westinghouse Traction Brake Co., Wilmerding, Pa.

**—(Seamless Steel.)**

Jamez, Jr., Jos. A., Phila., Pa.

National Tube Co., Pittsburgh, Pa.

**—(Storage, Oil, etc.)**

Biggs Boiler Works, Akron, Ohio.

Birmingham Boiler &amp; Eng'g. Co., Birmingham, Ala.

Chattanooga Boiler &amp; Tank Co., Chattanooga, Tenn.

Chicago Bridge &amp; Iron Works, Atlanta, Ga.

Downingtown Iron Works, Downingtown, Pa.

Hammond Iron Works, Warren, Pa.

Ingalls Iron Works Co., Birmingham, Ala.

Mecklenburg Iron Works, Charlotte, N. C.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Titusville Iron Works Co., Titusville, Pa.

**—(Wood.)**

Caldwell Co., Inc., W. E., Louisville, Ky.

Davis &amp; Son, G. M., Palatka, Fla.

Virginia Mch'y. &amp; Well Co., Richmond, Va.

Woodford Wood Tank Mfg. Co., G., Paschall P. O., Philadelphia.

**—(Wood Pickling.)**

Woodford Wood Tank Mfg. Co., G., Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

Paschall P. O., Philadelphia.

**TIN AND TERNE PLATES.**

American Sheet &amp; Tin Plate Co., Pittsburgh, Pa.

Bethlehem Steel Co., Bethlehem, Pa.

Granite City Steel Co., Granite City, Ill.

Youngstown Sheet &amp; Tube Co., Youngstown, Ohio.

**TOBACCO MACHINERY.**

Ripley Foundry &amp; Machine Co., Ripley, O.

**TOILET TISSUE.**

Victoria Paper Mills Co., Fulton, N. Y.

**TOOLS (Measuring.)**

Lufkin Rule Co., Saginaw, Mich.

—(Woodworking—Portable.)

Electric, Hand.

Wappat, Incorporated, Pittsburgh, Pa.

**TORCHES (Blow.)**

Wall Mfg. Supply Co., F., Pittsburgh, Pa.

**TOWERS (Electric Transmission.)**

American Bridge Co., New York, N. Y.

Bates Steel Corp., Walter, Gray, Ind.

Bessemer Galvanizing Works, Birmingham, Ala.

Nashville Bridge Co., Nashville, Tenn.

—(Radio.)

American Bridge Co., New York, N. Y.

—(Steel and Wood.)

Chattanooga Boiler &amp; Tank Co., Chattanooga, Tenn.

Cole Mfg. Co., R. D., Newnan, Ga.

—(Track.)

Sweet's Steel Co., Williamsport, Pa.

—(Tractors.)

Atlas Car &amp; Mfg. Co., The, Cleveland, O.

Caterpillar Tractor Co., San Leandro, Cal.

Clark Tractor Co., Battle Creek, Mich.

Cleveland Tractor Co., Cleveland, Ohio.

International Harvester Co., of America, Inc., Chicago, Ill.

—(Road.)

Caterpillar Tractor Co., San Leandro, Cal.

Cleveland Tractor Co., Cleveland, Ohio.

—(Attachments.)

W-R-M Co., Inc., Houston, Texas.

—(Trailers.)

Electric Wheel Co., Quincy, Ill.

—(Heavy Duty.)

Electric Wheel Co., Quincy, Ill.

—(Industrial.)

Easton Car &amp; Construction Co., Easton, Pa.

Electric Wheel Co., Quincy, Ill.

—(Pole.)

Electric Wheel Co., Quincy, Ill.

—(Tramways.)

American Steel &amp; Wire Co., Balto., Md.

Broderick &amp; Bascom Rope Co., St. Louis, Mo.

Leschen &amp; Sons Rope Co., A., St. Louis, Mo.

—(Transformers.)

General Electric Co., Schenectady, N. Y.

Westinghouse Elec. &amp; Mfg. Co., E. Pittsburgh, Pa.

—(Used.)

Electric Service Co., Cincinnati, Ohio.

—(Transmission Towers.)

Galvanized.)

Hates Steel Corp., Walter, Gray, Ind.

Bessemer Galvanizing Works, Birmingham, Ala.

McClintic-Marshall Co., Pittsburgh, Pa.

—(Trench Machinery.)

See Excavators (Trench.)

—(Trestles.)

Wooden.)

Patent Scaffolding Co., Chicago, Ill.

—(Tri-sodium Phosphate.)

Grasselli Chemical Co., Inc., Birmingham, Ala.

—(Trolley Wheels.)

Self Oiling.)

Moccasin Bushing Co., Chattanooga, Tenn.

—(Truck Cranes.)

Universal Crane Co., Lorain, O.

—(Trucks.)

(Dry Kiln.)

Moore Dry Kiln Co., Jacksonville, Fla.

—(Industrial.)

Atlas Car &amp; Mfg. Co., The, Cleveland, O.

Lansing Co., Lansing, Mich.

Nutting Truck Co., Chicago, Ill.

—(Motor.)

International Harvester Co., of America, Inc., Chicago, Ill.

—(Platform, Freight, Mill, Factory, etc.)

American Pulley Co., Philadelphia, Pa.

Clark Tractor Co., Battle Creek, Mich.

Electric Wheel Co., Quincy, Ill.

Nutting Truck Co., Chicago, Ill.

Trusco Steel Co., (Pressed Steel Division) Cleveland, Ohio.

—(Steel Shop.)

Angie Steel Stool Co., Plainwell, Mich.

**TUBES (Boiler.)**

See Boiler Tubes.

**TUBING (Metal.)**

Boiler Tube Co., of America, Pittsburgh, Pa.

**—(Seamless Steel.)**

National Tube Co., Pittsburgh, Pa.

Timken Rolling Bearing Co., Canton, O.

—(Turbo.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.

DeLaval Steam Turbine Co., Trenton, N. J.

General Electric Co., Schenectady, N. Y.

Westinghouse Elec. &amp; Mfg. Co., E. Pittsburgh, Pa.

—(Turnbuckles.)

Russell, Burdall &amp; Ward Bolt &amp; Nut Co., Port Chester, N. Y.

—(Turntables.)

American Bridge Co., New York, N. Y.

Easton Car &amp; Construction Co., Easton, Pa.

—(Portable for Motor Trucks.)

Blaw-Knox Co., Pittsburgh, Pa.

—(Unions.)

Dart Mfg. Co., E. M., Providence, R. I.

—(Unit Heaters.)

Grinnell Co., Inc., Providence, R. I.

Skinner Bros. Mfg. Co., St. Louis, Mo.

—(Valves.)

Jenkins Bros., New York, N. Y.

Ludlow Valve Mfg. Co., The, Troy, N. Y.

Lunkenshelmer Co., The, Cincinnati, Ohio.

Merco Nordstrom Valve Co., San Francisco, Cal.

Mueller Co., Decatur, Ill.

Vogt Brothers Mfg. Co., Louisville, Ky.

Vogt Machine Co., Henry, Louisville, Ky.

Westinghouse Traction Brake Co., Wilmerding, Pa.

—(Acid Proof.)

Lunkenshelmer Co., The, Cincinnati, O.

—(Gate.)

Ludlow Valve Mfg. Co., The, Troy, N. Y.

Lunkenshelmer Co., The, Cincinnati, Ohio.

Wood &amp; Co., R. D., Philadelphia, Pa.

—(Ventilating Systems.)

Skinner Bros. Mfg. Co., St. Louis, Mo.

Swartwout Co., Cleveland, Ohio.

—(Ventilators.)

(Roof.)

Merchant &amp; Evans Co., Philadelphia, Pa.

Milcor Steel Co., Milwaukee, Wis.

Robertson Co., H. H., Pittsburgh, Pa.

—(Rotary.)

Swartwout Co., Cleveland, Ohio.

—(Wadding.)

(Crepe, for package protection.)

Kimberly Clark Corp., Chicago, Ill.

—(Wall Hangers.)

Duplex Hanger Co., Cleveland, Ohio.

—(Wardrobes.)

(Hygienic, School.)

Wilson Corp., The J. G., New York.

—(Watchman's Portable Clocks.)

Davis-Paradis Watchman's Clock Corp., New York, N. Y.

Kaiser Clock Co., L. E., Balto., Md.

—(Waterproofing.)

(For Brick, Concrete, Granite.)

Asphalt Products Co., Syracuse, N. Y.

Foster Co., Benjamin, Philadelphia, Pa.

Servicised Premoulded Products, Inc., Chicago, Ill.

Senneshorn, Sons, Inc., L., New York.

—(Water Purification.)

Roberts Filter Mfg. Co., Darby (Phila.), Pa.

Seafie &amp; Sons, Wm. B., Oakmont, Pa.

—(Softening Apparatus.)

(Purifying.)

American Water Softener Co., Phila., Pa.

International Filter Co., Chicago, Ill.

—(Works Supplies and Appliances.)

Amer. Cast Iron Pipe Co., Birmingham.

Cast Iron Pipe Research Assn., Chicago.

Cook, Inc., A. D., Lawrenceburg, Ind.

Glamorgan Pipe &amp; Fdry. Co., Lynchburg, Va.

Leadite Co., The, Philadelphia, Pa.

Mueller Co., Decatur, Ill.

U. S. Pipe &amp; Foundry Co., Burlington, N. J.

Wood &amp; Co., R. D., Philadelphia, Pa.

**WELDING APPARATUS (Electric Arc.)**

General Electric Co., Schenectady, N. Y.

Westinghouse Elec. &amp; Mfg. Co., E. Pittsburgh, Pa.

**WELL CONTRACTORS (Oil, Artesian, etc.)**

Virginia Machy. &amp; Well Co., Richmond, Va.

**WHEELBARROWS.**

Lansing Co., Lansing, Mich.

Sterling Wheelbarrow Co., Milwaukee.

**WHEELS AND AXLES.**

Carnegie Steel Co., Pittsburgh, Pa.

**WINCHES.**

Raggen Derrick Co., Chicago, Ill.

Schultz &amp; Son, A. L., Chicago, Ill.

**WINDOW Frames and Sash (Metal.)**

Bayley Co., The William, Springfield, O.

Lupton's Sons Co., David, Phila., Pa.

Trusco Steel Co., Youngstown, O.

**WINDOWS (Bronze Casement.)**

Michaelis Art Bronze Co., Covington, Ky.

—(Steel Basement, Casement.)

Bayley Co., The William, Springfield, O.

Detroit Steel Products Co., Detroit, Mich.

Lupton's Sons Co., David, Phila., Pa.

Milcor Steel Co., Milwaukee, Wis.

—(Steel Garage.)

Detroit Steel Products Co., Detroit, Mich.

Lupton's Sons Co., David, Phila., Pa.

—(Steel Pivoted, Screened.)

Bayley Co., William, Springfield, O.

—(Ventilating.)

Bayley Co., The William, Springfield, O.

Detroit Steel Products Co., Detroit, Mich.

Lupton's Sons Co., David, Phila., Pa.

**WIRE (All Kinds.)**

American Steel &amp; Wire Co., Chicago.

Roebbing's Sons Co., John A., Trenton, N. J.

Ryerson &amp; Son, Inc., Jos. T., St. Louis and New York.

—(Barbed Wire, etc.)

American Steel &amp; Wire Co., Balto., Md.

Gulf States Steel Co., Birmingham, Ala.

Youngstown Sheet &amp; Tube Co., Youngstown, Ohio.

—(Fence.)

Anchor Post Fence Co., Baltimore, Md.

Cyclone Fence Co., Waukegan, Ill.



Patent Applied for

## COOK DEEP-WELL TURBINE

SELF-OILING-WEATHERPROOF

This is the Pump YOU  
have been hoping for - - -

Foolproof - Trouble-proof

Compact

Sturdy

Efficient

Adaptable

BULLETIN - 36

A. D. COOK, Inc.  
Lawrenceburg—Indiana

## DAVIS TURBINE WATER WHEELS

Most Powerful, Dur-  
able, Dependable, and  
Economical in use of  
water.

Write for catalog.

DAVIS FOUNDRY &  
MACHINE WORKS  
ROME, GEORGIA.

## WALL products for INDUSTRY

INCLUDING welded and  
brazed steel products, the Wall  
line for industrial use is un-  
usually complete. Priced excep-  
tionally low considering quality  
and ability to render "Service  
with Safety" under severest  
operating conditions. Write.

P. WALL MFG. SUPPLY CO.,  
3126 Preble Ave., N. E.,  
Pittsburgh, Pa.

## DREADNAUGHT

"Service With Safety"

BLOW TORCHES & FURNACES  
Carriers - Tallow Pots - Oilers

"SINCE 1864"  
WALL  
SUPERIOR  
PRODUCTS

# Flat Wire

John A. Roebling's  
Sons Company  
Trenton, N. J.



## THE CAMBRIA CLAY PRODUCTS CO.

MANUFACTURERS

SEWER PIPE - FLUE LINING - WALL COPING  
FACE BRICK - FIRE BRICK - FIRE CLAY  
HOLLOW BUILDING TILE

Office and Works - BLACKFORK, OHIO

## The Milcor One-Piece Basement Window

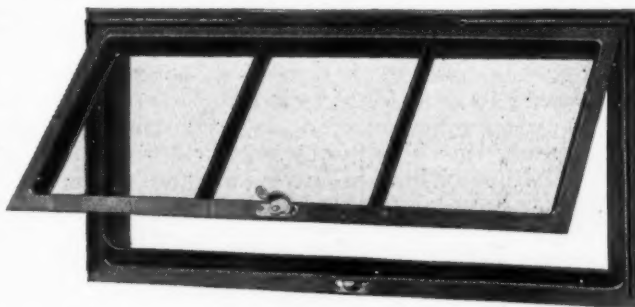
This Milcor Basement Window is stamped from  
solid sheets of Copper Alloy Steel and formed with-  
out joints. Only the bars, separating the lights, are  
spot welded to the frame. This one-piece construc-  
tion assures permanence, great strength and neatness.  
No warping . . . no swelling . . . no bolts . . . no  
screws. Write for complete information.

### MILCOR STEEL COMPANY

(formerly Milwaukee Corrugating Co., Milwaukee, Wis.  
and The Eller Mfg. Co., Canton, Ohio)

Main Offices 1451 Burnham St., Milwaukee  
Plants at Milwaukee, Wis., Canton, Ohio, La Crosse, Wis.,  
Chicago, Ill. and Kansas City, Mo.

Sales Offices: New York, 418 Pershing Sq. Building; Boston,  
Mass., 726 Little Building; Atlanta, Ga., 207 Bona Allen Build-  
ing; Minneapolis, Minn., 642 Bldg. Exchange Building;  
Little Rock, Ark., 104 W. Markham Street



## MILCOR PRODUCTS





Ludlow Engineers.....  
Ludlow-Saylor Wire Co.....  
Ludlow Valve Mfg. Co.....  
Lufkin Rule Co.....  
Luitwieler Pumping Engine Co.....  
Lunkensheimer Co.....  
Lupton's Sons Co., David.....

## M

MacElwee & Crandall, Inc..... 30  
Macon Concrete Roller Co.....  
Mahon Co., R. C.....  
Main, Chas. T.....  
Manhattan Perf. Metal Co..... 28  
Manistee Iron Works Co..... 24  
Marine Metal & Supply Co..... 95-95  
Maryland Metal Bldg. Co.....  
Maryland Pipe & Steel Corp..... 94  
Maryland Trust Co.....  
McClinton-Marshall Co..... 12  
McCrory Co., J. B..... 31  
McEverest, Inc.....  
McLanahan and Stone Mch. Co..... 26  
Mecklenburg Iron Works.....  
Mees & Mees..... 31  
Meigs, Bassett & Slaughter.....  
Mercantile Trust Co.....  
Merchant & Evans Co.....  
Mero Nordstrom Valve Co.....  
Michaels Art Bronze Co.....  
Milburn, Heister & Co..... 30  
Miller Steel Co..... 121  
Miller & Asso., Wendell P..... 36  
Miller Co..... 22  
Milwaukee Electric Crane & Hoist Corp..... 9  
Missouri-Kansas Lines.....  
Missouri Pacific Lines..... 37  
Moccasin Bushing Co..... 39  
Model Land Co. (Flagler System)..... 39  
Moeschl-Edwards Corrugating Co.....  
Monighan Mfg. Corp.....  
Moore Dry Kiln Co..... 18  
Morgan Construction Co.....  
Morris Machine Works.....  
More Chain Co.....  
Mott Core Drilling Co..... 32  
Mountain States Steel Foundries.....  
Moyer Co., Tilghman..... 32  
Mueller Co.....  
Mullergren, Arthur L..... 30  
Mundt & Sons, Chas..... 25  
Mundy Hoisting Engine Co., J. S.....  
Myers & Bro. Co., F. E..... 24

## N

Nashville Bridge Co..... 12  
Nashville Hardwood Flooring Co.....  
Nashville Industrial Corp.....  
National Blow Pipe & Mfg. Co., Ltd. 22  
National Cast Iron Pipe Co.....  
National Equipment Corp.....  
National Paving Brick Mfrs. Asso.....  
National Traffic Guard Co.....  
National Tube Co..... 23  
Newport News Shipbuilding & Dry Dock Co.....  
Norfolk & Western Railway..... 36  
Northwest Engineering Co..... 97  
Novo Engine Co.....  
Nussbaum & Co., V. M.....  
Nutting Truck Co.....  
Nuveen & Co., John.....

## O

O'Brien Mehry. Co., The..... 96  
Ohio Power Shovel Co.....  
Oil City Boiler Works.....  
O. K. Clutch & Machinery Co.....  
Okonite Co.....  
Old Dominion Box Co., Inc..... 107  
Owen Bucket Co., The..... 98  
Owensboro Sewer Pipe Co.....

## P

Pacific Flush-Tank Co..... 22  
Page Fence Association..... 113  
Patent Scaffolding Co.....  
Patterson Co., W. W..... 12  
Penn Mehry. Co., H. O.....  
Pennsylvania Drilling Co..... 39  
Perry, Buxton, Doane Co..... 97  
Phoenix Iron Co., The..... 13  
Piat, Wm. M..... 30  
Picard Laboratories, The..... 31  
Pipe Railing Constr. Co..... 15  
Pittsburgh-Des Moines Steel Co..... 26  
Pittsburgh Piping & Equip. Co.....  
Pittsburgh Testing Laboratory..... 32  
Platt Iron Works..... 24  
Poe Piping & Heating Co..... 30  
Porter Co., H. K.....  
Portland Cement Ass'n.....  
Power Piping Co.....  
Preacher & Co., Inc., G. Lloyd..... 30  
Progressive Mfg. Co., The.....  
Proposed Advertisements..... 89 to 91  
Provident Savings Bank & Trust Co..... 88

## Q

Quincy Compressor Co.....  
Quinn Wire & Iron Works.....

## R

Randle Mehry. Co., The..... 95  
Raymond Bros. Impact Pulv. Co.....  
Raymond Mfg. Co..... 22  
Reading Iron Co.....  
Rees, S. P..... 30  
Republic Rubber Co..... 25-85  
Republic Steel Corp..... 94 to 97  
Resale Dept.....  
Richards-Wilcox Mfg. Co..... 12  
Richmond Structural Steel Co.....  
Riddell Co., W. A..... 100  
Ripley Fdry. & Machine Co..... 13  
Roanoke Iron & Bridge Works.....  
Robert & Co.....  
Roberts Filter Mfg. Co..... 6  
Robertson Co., H. H.....  
Robinson & Orr.....  
Rockford Power Machinery Co.....  
Roebling's Sons Co., John A..... 121  
Rowan, W. E..... 32  
Rundle-Spence Mfg. Co..... 6  
Russell, Burdall & Ward Bolt & Nut Co.....  
Rust Engineering Co..... 22-109  
Ryerson & Sons, Inc., Jos. T.....

## S

Salem Foundry & Machine Works..... 10  
Sanderson & Porter..... 31  
Saugen Derrick Co.....  
Sauerman Bros., Inc..... 98  
Savannah Creosoting Co..... 18  
Saville, Inc., Allen J..... 32  
Seale & Sons Co., Wm. B..... 44  
Sehfeld's Sons Co., J. S..... 26  
Schultz & Son, A. L..... 31  
Seofield Engineering Co.....  
Sebastian Lath Co.....  
Service Caster & Truck Co.....  
Servicised Products Corp.....  
Servicised Premoulded Products, Inc.....  
Shaw Co., B. Russell..... 30  
Shore-Line Builders, Inc..... 103  
Simmons Inc. & Asso., B. Stanley..... 32  
Simplicity System Co..... 103  
Sirmine & Co., J. E..... 31  
Skinner Bros. Mfg. Co., Inc.....  
Slow-Sheffield Steel & Iron Co..... 109  
Smith Corp., A. O..... 30  
Smith, Elroy G.....  
Smith Co., S. Morgan.....  
Smith & Son Co., Oscar T..... 88  
Smith & Co., W. M..... 97  
Snare Corp., Frederick..... 32  
Snead Architectural Iron Works.....  
Sonneborn Sons, Inc., L.....  
Southern Drilling Co.....  
Southern Engineering Co..... 12  
Southern Hotel, The.....  
Southern Iron & Equip. Co.....  
Southern Spindle & Flyer Co.....  
Southwestern Laboratories..... 32  
Spoon & Lewis.....  
Sprague & Henwood, Inc..... 32  
Spring, Charles Herbert.....  
Standard Lime & Stone Co..... 95  
Steel and Lobby..... 31  
Steele & Sons, J. C.....  
Stephens-Adamsen Mfg. Co..... 109  
Sterling Engine Co.....  
Sterling Wheelbarrow Co.....  
Stewart & Co., Paul..... 95  
Stewart Iron Works..... 15  
Stillman and Van Sclen, Inc..... 31  
Stone & Webster Engineering Corp. 42  
Stonhard Co.....  
Stoneville Cabinet Co..... 94  
Strand & Co., N. A.....  
Street Bros. Machine Works..... 99  
Stuebner Iron Works, Inc., G. L..... 98  
Sullivan Machinery Co.....  
Swartwout Co.....  
Sweet's Steel Co..... 98  
Swenson Evaporator Co.....

## T

Table of Contents..... 43  
Taylor-Colquitt Co..... 18  
Taylor Forge & Pipe Works.....  
Taylor Co., Halsey W.....  
Taylor Sons Co., Chas.....  
Taylor, Wilson & Co., Inc.....  
Tennessee Central Railway.....  
Tennessee Coal, Iron & Railroad Co..... 11  
Tennessee Metal Culvert Co.....  
Texas Power & Light Co.....  
Thew Shovel Co., The.....  
Thompson & Bros., T. C..... 30  
Timken Roller Bearing Co.....  
Titusville Iron Works Co..... 107

Trackson Co.....  
Truscon Steel Co.....  
Truscon Steel Co. (Pressed Steel Division).....  
Tucker & Laxton..... 32  
Turner, C. A. P..... 30

## U

Union Steam Pump Co.....  
Union Tank & Pipe Co.....  
United Engineers & Constructors, Inc..... 33  
U. S. Pipe & Foundry Co..... 83  
Universal Crane Co., The..... 126  
Universal Crusher Co.....  
Universal Power Shovel Co.....

## V

Veeder-Root Inc.....  
Victoria Paper Mills Co.....  
Viking Pump Co.....  
Virginia Bridge & Iron Co..... 13  
Virginia Mehry. & Well Co.....  
Vogt Bros. Mfg. Co.....  
Vogt Machine Co., Henry..... 6

## W

Wadleigh & Bailey..... 30  
Wales Wood Preserving Co.....  
Walker Electrical Co..... 31  
Wall Mfg. Supply Co., P..... 121  
Wappat, Inc.....  
Warner Service Co..... 31  
Webb Electric Co..... 32  
Weber Co., F.....  
Webster & Weller Mfg. Companies 109  
Weller & Co.....  
Western Electric Co..... 4  
Western Metal Mfg. Co.....  
Westinghouse Electric & Mfg. Co.....  
Westinghouse Traction Brake Co.....  
Wheeler, Walter H..... 30  
Whitaker Paper Co..... 10  
Whitcomb Co., George D..... 98  
White Co., Gilbert C..... 30  
White Engineering Corp., The J. G 31  
Whiting Corp..... 117  
Whitney Metal Tool Co..... 8  
Widmer Engineering Co..... 30  
Wiedeman and Singleton, Inc..... 31  
Wiley & Co., Inc..... 31  
Wiley & Wilson..... 31  
Williams, Inc. O. F..... 31  
Williamson, Lee H..... 30  
Wilson Corp., The J. G..... 113  
W-K-M Co., Inc.....  
Wood & Co., R. D..... 24  
Woodhouse Chain Works..... 109  
Wood's Sons Co., T. B.....  
Woodstock Slag Corp..... 100  
Woolford Wood Tank Mfg. Co., G. 28

## Y

Yoder Co., The.....  
Young & Selden Co..... 113  
Youngstown Sheet & Tube Co.....

## Z

Zelnicker in St. Louis..... 95

Advs. marked † not in this issue.  
Advs. marked ‡ appear in first issue of month.  
Advs. marked \* appear every other week.

Classified }  
Opportunities } Pages 92-93

Proposal }  
Advertisements } Pages 89 to 91

Resale }  
Department } Pages 94 to 97 (2-30)

A DAILY LIST  
OF  
SOUTHERN  
BUSINESS  
OPPORTUNITIES

The DAILY CONSTRUCTION BULLETIN issued each business day by Manufacturers Record gives advance, reliable news covering whatever is being planned or started throughout the sixteen Southern states from Maryland to Texas in the way of industrial development, new construction work, building operations, engineering projects, public improvement work of all kinds, the organization of new firms for every purpose and other important phases of Southern development.

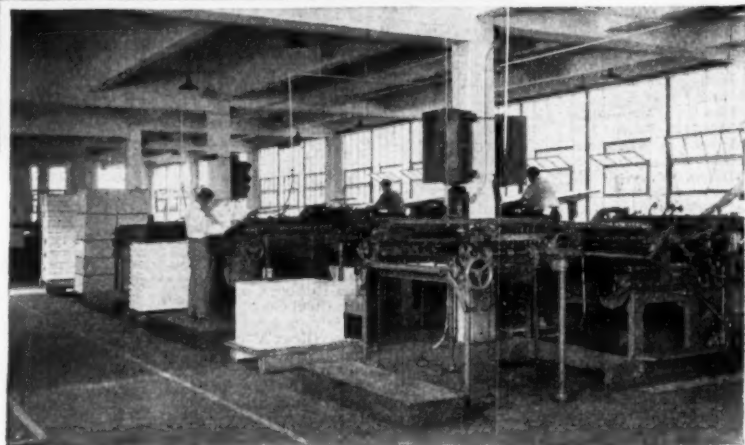
Every firm interested in the great Southern market, will find this service of practical business value in keeping in close touch with sales opportunities.

Sample copies, subscription and advertising rates upon request.





*Plant of the Rein Printing Co., Houston, Tex., exterior of concrete tile; structural frame of reinforced monolithic concrete. Howell & Thomas, Cleveland, O., Architect; J. B. Townsend, Houston, Texas, Contractor*



## CONCRETE *invites commerce* *to "dress up" its buildings*

An architect who had vision—and skill; a structural material that adapted itself to every requirement of his design—these, combined, produced this printing plant in Houston, Texas. Such buildings are an asset to the community and a good investment for their owners. Of all structural materials, concrete is the most versatile. It can be molded into any form. It builds foundations, super-structures, floors, and walls—and provides a suitable, dignified decorative treatment. *It is firesafe.*

# PORTLAND CEMENT *Association*

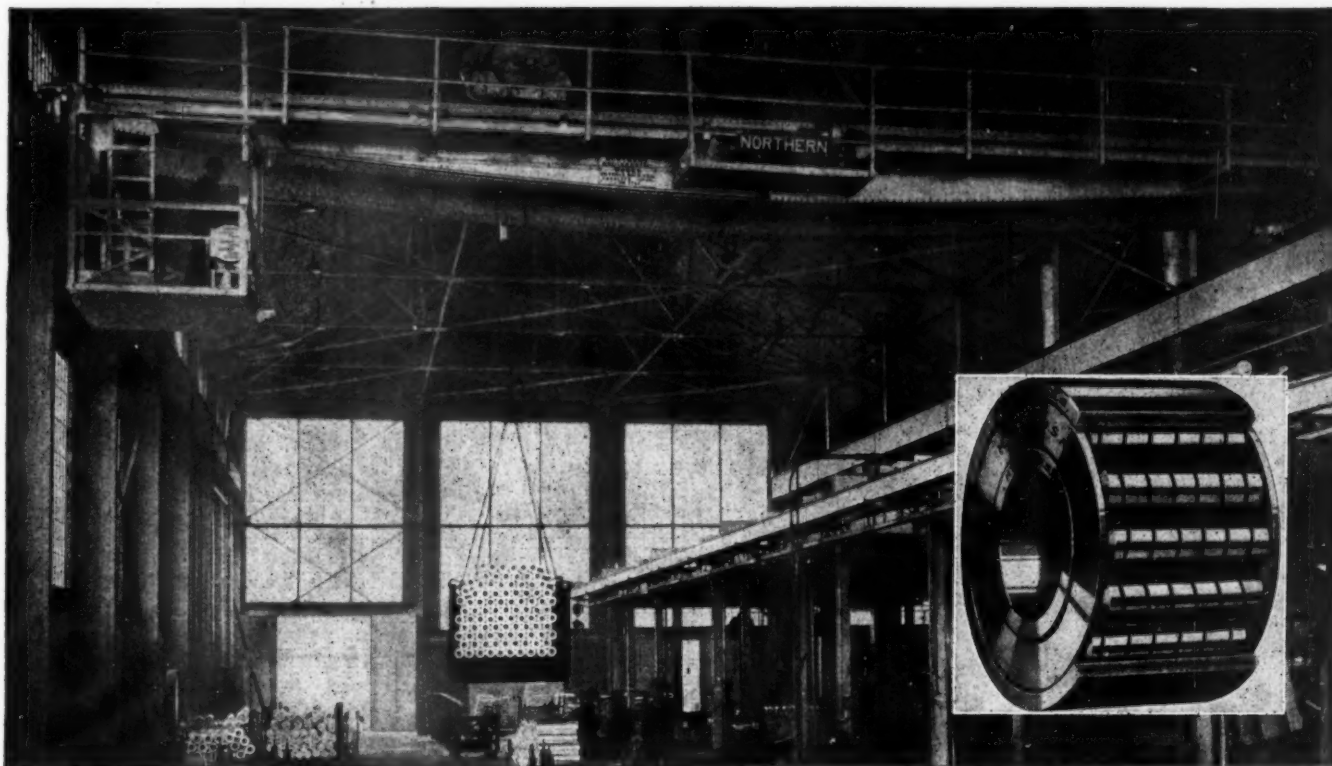
*Concrete for permanence and firesafety*

33 WEST GRAND AVENUE  
CHICAGO

## Attentionless performance with Hyatts

Smooth rolling Hyatts at the bearing points of Northern Cranes, are continuing to demonstrate the long-lasting, power saving, attentionless performance which has won them assignments in most of the leading makes of cranes.

Less starting effort under load . . . quicker acceleration . . . freedom from constant lubrication . . . no replacements . . . shock, strain, and wear minimized.



5-ton, 62' span completely Hyatt equipped Crane, built by the Northern Engineering Works, Detroit, Mich.

These are the advantages for those who employ Hyatt Roller Bearings to carry their burdens of continuous operation.

You, too, will find Hyatts a profitable investment. For no matter where applied, Hyatt Roller Bearings offer a forward step in operating efficiency.

**HYATT ROLLER BEARING COMPANY**

Newark    Detroit    Chicago    Pittsburgh    Oakland

**HYATT**  
**ROLLER BEARINGS**  
PRODUCT OF GENERAL MOTORS

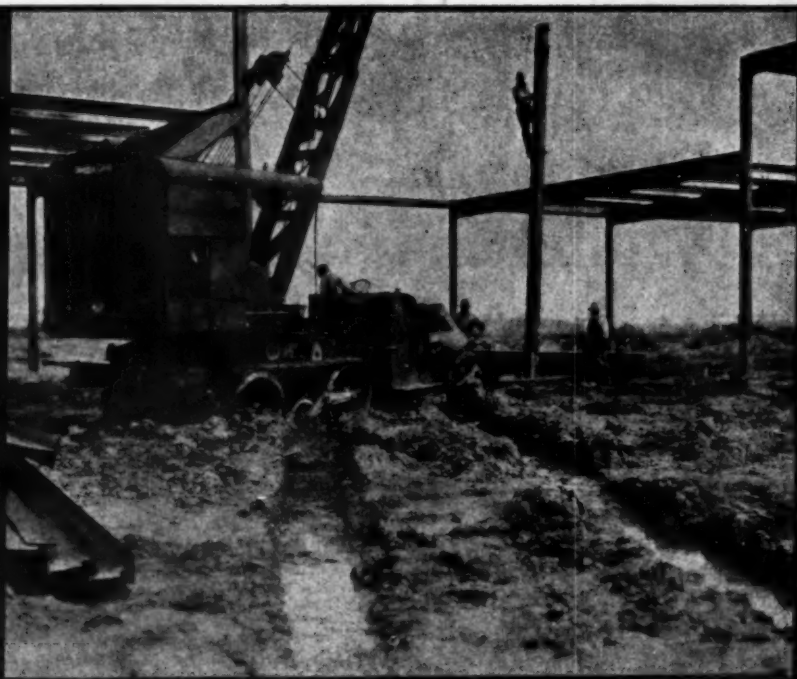


Vogt and Conant, Cleveland, get their Universal Truck Crane over soft ground to a steel erecting job.



Arkansas State Highway Department's Universal operated as a dragline digging and cleaning out drainage ditches.

City Crane Service Company, Davenport, Iowa, count on their Universal, Christie Crawler equipped, to handle profitable jobs like this one.



## Speed, Traction, Reduced Wheel Loads — all in the Motor Truck (Christie) Crawler

**T**HE Motor Truck (Christie) Crawler, applied exclusively to the Universal Truck Crane, supplies a mounting which carries the crane any place at any time.

On pavement, the crane travels at motor truck speed (10 to 15 miles an hour) on eight fully rubber tired wheels to meet modern requirements for reduced wheel loads. For travel where truck wheels can't get through, the crawler treads may be attached as easily as a set of tire chains.

You get traction and support for soft going, rubber tired speed for travel on the highway, and reduced wheel loads—all in one mounting, still further increasing the usefulness of the Universal Truck Crane.

THE UNIVERSAL CRANE COMPANY • Lorain, Ohio

# UNIVERSAL

Universal 35, 14 yd. shovel, 2 Speed Center Drive Crawler mounted, is also made by the Universal Crane Co.



Southeast Sales Office:  
First National Bank Bldg., Atlanta, Ga.

Southwest Sales Office:  
1415 Magnolia Bldg., Dallas, Texas

